



Financial Forecast Overview & Financial Baseline

*Costs Required to Continue
Providing the Current Level of Service*

Prepared for the City Light Review Panel
January 2011

**Seattle City Light
Financial Forecast Overview & Financial Baseline
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Introduction and Executive Summary

This document was prepared as a part of the 2010-11 strategic planning efforts and the intended audience is the City Light Review Panel. The paper describes a baseline cost projection for maintaining City Light operations in generally the current configuration for 2011-2016. The baseline represents the judgment of City Light about the minimum level of near term responsible investments necessary to maintain operations and meet customer demand over the next 6 years without significantly increasing operating risk. This projection is designed to serve as a “reference case” for use in the upcoming phase of the strategic planning process where various initiatives are considered and an overall strategy is selected.

The key finding of this paper is that to maintain our current level of service and programs, rate increases averaging about 4.2% per year will be required for years 2012-2016. The primary drivers of these increases are:

Rate Driver	% of total change in revenue requirement in 2016 vs. 2010
Debt Service (Costs from funding Capital Program)	46%
Power Costs	35%
Non-Power O&M	20%

Perhaps an unexpected conclusion of this study is that Non-Power O&M is the smallest driver of the projected change in rates from 2010 to 2016. Additionally, labor and benefit costs represent a relatively small portion (about 15%) of the expenditures that are covered in the annual City Light revenue requirement.

Several points are important to consider regarding this baseline financial forecast:

- It should not be considered a target of where the utility needs to be positioned to best serve customers over this period. In the coming months we will discuss with the Review Panel and City Policymakers numerous strategic initiatives to address the challenges and opportunities the Utility faces in the coming years.
- The financial baseline should also not be taken as an indication that no improvement opportunities exist. The results of the baseline rate projection *compel* us to look for opportunities to reduce costs. Management is confident that there are opportunities to improve efficiency and effectiveness through programs that may require changes in policies and practice. The strategic plan, through initiatives to be proposed, will document such opportunities.
- Actual rate changes for years 2013-2016 may vary to some degree from the figures shown in this document due to:
 - (1) Inherent uncertainty in cost projections several years out. For example, the baseline provides funding to meet currently known legal and regulatory requirements, but such requirements are subject to change.

- (2) The inclusion of strategic initiatives (that may affect costs up or down) during the upcoming phase of the strategic planning process.
- (3) Financial policy action that may be taken regarding the level of net wholesale revenue to assume when base rates are set, and the extent to which the Rate Stabilization Account (RSA) and rate surcharges will be used to make up shortfalls.

The paper contains four main sections:

- Section 1 provides an overview of industry cost pressures and trends. City Light's costs over the past decade for major electric utility spending categories such as production, distribution, transmission and administrative/general expenses have increased at rates comparable to the electric utility industry as a whole. Costs in the future are likely to be impacted by many of the same drivers, such as needed maintenance for reliability and to modernize the grid, environmental regulations, energy price volatility, slackened demand for power due to the sluggish economy and increased conservation, and the need to address an aging workforce.
- Section 2 introduces our current key financial modeling elements and their assumptions. To develop this financial baseline, City Light examined historical expenditures, the 2011-2012 budget, the Adopted 2011-2016 CIP, the load forecast, power market forecast, and the underlying drivers and assumptions in all these. The controllable versus non-controllable nature of various expenses, and the volatility and uncertainty around several elements of the utility's revenue requirement (such as net wholesale revenue) are key issues confronted in this section. In compiling the projection, we revisited assumptions made previously, and made changes where appropriate. For example, to be consistent with the "baseline" nature of the projection, we reduced planned six-year CIP spending by \$165 million, recognizing that some spending could be deferred or eliminated. We refined O&M cost projections, which we had previously projected for internal purposes as increasing at the general rate of inflation.
- Section 3 provides further detail about the key Operation & Maintenance (O&M) assumptions by expense type. The O&M forecast for 2013-2016 is based on the 2011-2012 Adopted Budget and refined assumptions of growth rates for major components of O&M spending that range from CPI to 8%.
- Section 4 provides the results of the baseline projection, along with commentary about key drivers and conclusions.

We look forward to the engagement of the Review Panel, Policymakers and our customers in the coming months as we develop the strategies to position the utility to achieve its vision statement of:

Providing the best customer service experience of any utility in the nation

1 Industry Context, Cost Drivers & Uncertainty

Before discussing the specifics of City Light's cost drivers, we believe it worthwhile to provide some background information on key electric utility industry concerns and their relevance to City Light.

Several studies are available that discuss electric utility rate pressures in the recent years and the top concerns of industry leaders at present. Many of the articles are 4-5 years old, and were written to explain a significant increase in rates in 2006-2007. These studies stressed increasing fuel costs (natural gas, oil) and investments to comply with environmental regulation as the main drivers for the rising expenditures among the utilities. The intervening financial crisis and recession have markedly changed the industry landscape. Post-crisis literature lists green power investments (conservation, energy-efficiency, renewable energy) and Smart Grid costs as the main expenditures that will drive electric utility costs up, along with the additional stress of stagnant or declining demand.

Industry Concerns Pre-Financial Crisis¹

- Demand for more power and greater reliability will require additional generation, transmission, and distribution investments.
- Substantial increases in the costs of building utility infrastructure projects (raw material costs, etc.).
- Investment and operating costs to comply with known and still uncertain regulatory and environmental mandates.
- O&M cost increases (non-fuel) as opportunities for efficiency (e.g., administrative) are exhausted.
- Swiftly rising fuel and purchased power costs.

Industry Concerns Post-Financial Crisis² (*discussed further below*)

- A. Financial consequences of implementation of improvements/maintenance for reliability, Smart Grid and cyber security initiatives.
- B. Cost increases driven by new environmental regulations affecting air, water and hazardous waste.
- C. Energy price volatility.
- D. Slackened demand for power due to the sluggish economy and increased conservation.
- E. Aging workforce.

Consulting firm Black & Veatch published a 2009/2010 Electric Utility Industry Survey which had 329 utility industry participants that included investor-owned utilities (IOUs), public utilities, state and regional power agencies, federal power marketing agencies, merchant and non-regulated generators, consulting firms and other industry representatives.³ Participants rated industry issues on a scale from 1

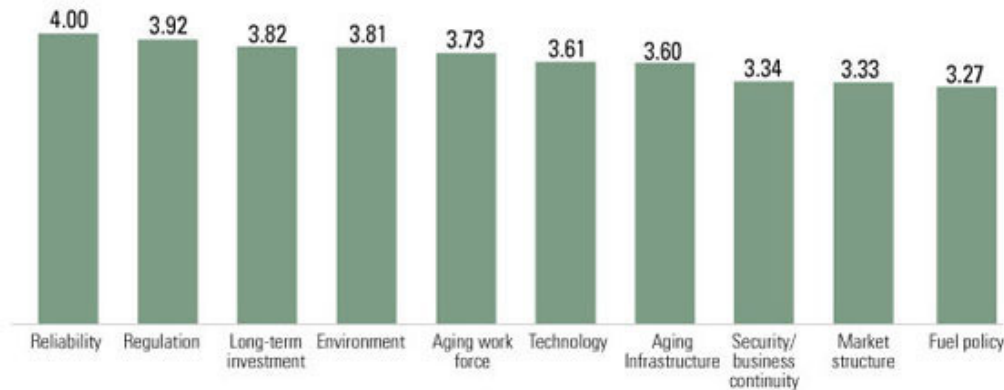
¹ Compiled from the following: *Rising Utility Construction Costs: Sources and Impacts*, 2007
http://www.edisonfoundation.net/Rising_Utility_Construction_Costs.pdf;
Financial Challenges of Rising Utility Costs and Capital Investment Needs, 2006
http://www.brattle.com/_documents/UploadLibrary/Upload398.pdf ;
Why Are Electricity Prices Increasing? An Industry-Wide Perspective 2006
http://www.brattle.com/_documents/UploadLibrary/ArticleReport2414.pdf
<http://www.bv.com/energysurvey/>

² Compiled from the following: *Utility Financial Performance: Warning Signs Ahead* , 2009
<http://www.elp.com/index/display/article-display/9451989687/articles/electric-light-power/volume-87/issue-5/sections/utility-financial.html>; *2009/2010 Electric Utility Industry Survey Results*, <http://www.bv.com/energysurvey/>

³ Summary and full survey can be accessed online at <http://www.bv.com/energysurvey/>

to 5 where 1 is non-important and 5 is very important. Figure 1.1 shows that the top five concerns for the energy industry participants are: reliability, regulation, long-term investment, the environment, and aging work force.

Figure 1.1⁴
Top Concerns of US Electric Utility Industry Representatives



A. Reliability, Smart Grid and Cyber Security

The number one concern cited by participants in the Black & Veatch 2009/2010 Electric Utility Industry Survey is reliability. An electric utility is required to have a supply of power available that is sufficient to exceed the highest point of demand. In an economic downturn, when access to capital is constrained, utilities are focusing on making do with what they have to continue meeting the cyclical demands of their customers as opposed to building new baseload generation.

For City Light, the issue of reliability relates more to the condition of our delivery infrastructure assets. Due to recent shortfalls in revenues we have deferred maintenance on our aged infrastructure. As technological advancements in generation, transmission, and distribution evolve it is expected that City Light will phase in “Smart” technology by default over the long run. City Light also is required to ensure that information and communication assets are secure from increased cyber security threats.

B. Cost Increases Driven by New Environmental Regulations: Green Power Investments

More than 93% of the Black & Veatch survey participants believe carbon legislation will be enacted at the national level sometime in the next decade, with about 66% believing it will happen by 2012. However, uncertainty surrounding climate legislation hampers utilities’ plans to move forward with major capital programs that are intended to meet current or future demand and/or replace generation assets that are beyond their service life. A compounding concern is escalating prices for all generation fuels, and legislative limitations on wider use of certain fuels (natural gas and petroleum). Finally, ambitious, heavily financed capital expansion could pressure inflation in materials, labor and borrowing costs.

City Light rates will be pressured by the cost of compliance with I-937 (requiring increasing procurements of renewable power). Strategic considerations include whether to meet the requirements with renewable energy credits (RECs) or acquiring/constructing qualifying generation.

C. Energy Price Volatility

⁴ Source: Black and Veatch, <http://www.bv.com/energysurvey/>

Between 2002 and 2008, natural gas prices rose by over 300 percent. Then in 2009, the price of natural gas fell to roughly half the 2008 level. In 2009, the annual average natural gas wellhead prices reached their lowest level in 7 years. Increased supply due to the availability of shale gas, coupled with mild winter temperatures and higher production and storage levels, and significant expansions of pipelines capacity also worked to put downward pressure on natural gas prices. At the same time, the cost of coal rose 6.8 percent, largely due to long-term contracts signed prior to the recent recession. Between 2000 and 2009, coal prices to electric power plants rose 84 percent. Each year the Energy Information Association (“EIA”) produces an annual energy outlook. In an early preview of the domestic energy resources and consumption projections through 2035 the EIA says that “technically recoverable” shale gas resources have doubled in a year’s time “reflecting additional information that has become available with more drilling activity in new and existing shale plays.”⁵ If economic conditions remain stagnant and production levels stay high, prices could remain low for years to come.

D. Uncertain Demand

Utilities have increasing demands to spend more money on basic infrastructure, energy efficiency, Smart Grid and cyber security. However, their sales – as a result of the very programs they are paying to implement – are declining or flat. This point has been also raised in another paper titled “Return of the Energy Services Model: How Energy Efficiency, Climate Change, and Smart Grid Will Transform American Utilities” written by Peter Fox-Penner from the Brattle Group. Fox-Penner writes that investments in energy-efficiency, to decarbonize power generation, and Smart Grid will require charging current customers more and more for their gradually declining levels of use.

E. Aging Work Force

The aging work force is an important issue that will need to be addressed in the near future as current workers retire and utilities must hire replacements, which in turn will require additional job training and other monetary incentives to attract and retain quality employees. In the Black & Veatch survey, the aging workforce was listed as the #2 concern by public utilities, second only to reliability.

Discussion of Cost Trends

The Electric Power Annual 2009 Report prepared by the Energy Information Agency (EIA) summarizes electric power industry statistics at the national level. This report includes O&M expense statistics for major U.S. IOUs for the period 1998-2009, shown below in Figure 1.2. The EIA Report only reflects data for IOUs because EIA stopped collecting this type of data from public utilities in 2004. Thus, there is no data for major U.S. public power utilities past 2003.

Figure 1.2 below shows that Production, Transmission, Distribution, and Administrative and General Expenses have been increasing industry-wide over the last decade. City Light’s costs are also charted using a smaller but proportional scale on these same charts. Information about year-by-year changes in SCL costs are discussed in Section 3 of this document.

Transmission expenditures have more than doubled since 2000. The highest decline in 2009 was in production expenditures mainly due to a decrease in the cost of fuel and lower electricity prices, as shown by lower purchased power expenditures. Distribution and transmission costs have only slightly decreased whereas administrative and general expenses increased. Maintenance costs have been increasing over time and only slightly decreased between 2008 and 2009. Depreciation and taxes have been fluctuating

⁵ Energy Metro Desk, December 20, 2010, Volume 2, Issue 24

from year to year. Figure 1.3 shows a composite of all of these major expense categories, compared against inflation.

Figure 1.2
Selected Expenses for Major U.S. Investor-Owned Utilities, 1998-2009 (in \$ millions)⁶

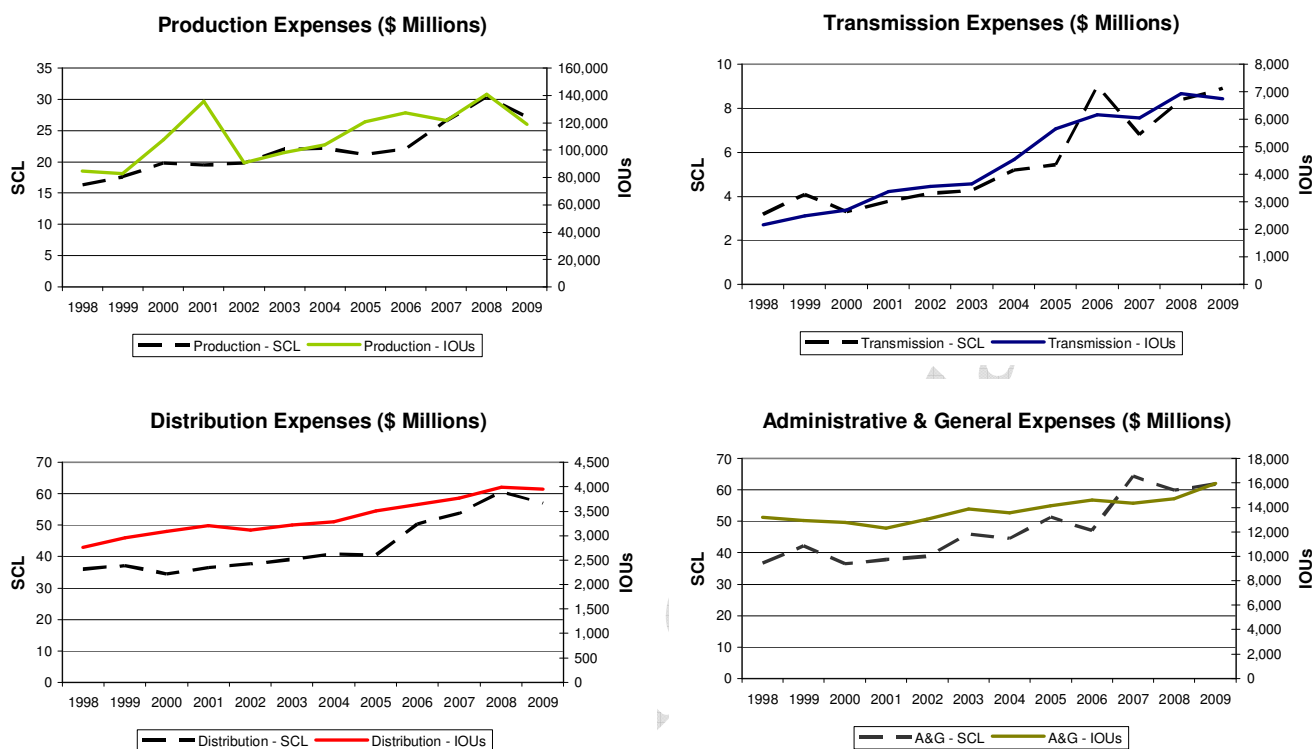
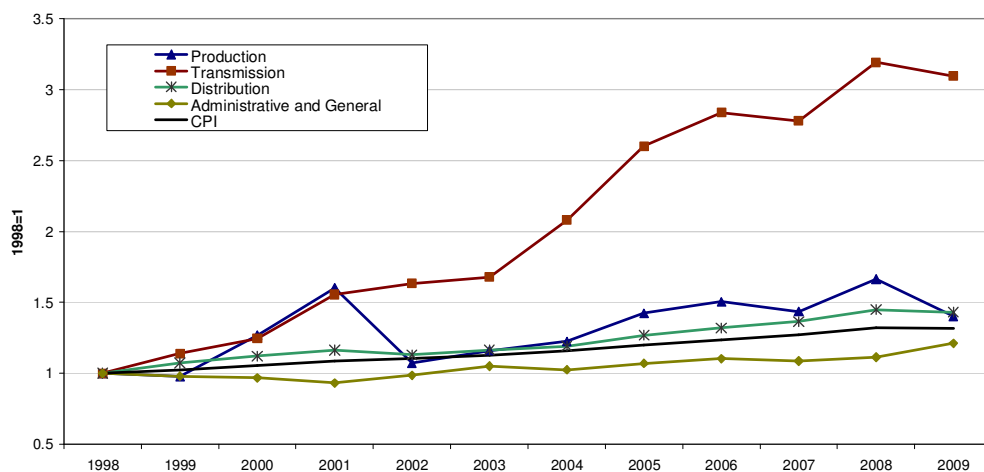


Figure 1.3
Selected Expenses for Major U.S. Investor-Owned Utilities and CPI, 1998-2009



⁶ Figure 1.2 shows selected expense statistics for major U.S. Investor-Owned Utilities (IOUs) for the period 1998-2009. The EIA Report only reflects data for IOUs because EIA stopped collecting this type of data from public utilities in 2004. Thus, there is no data for major U.S. public power utilities past 2003.

2 Financial Forecast Assumptions

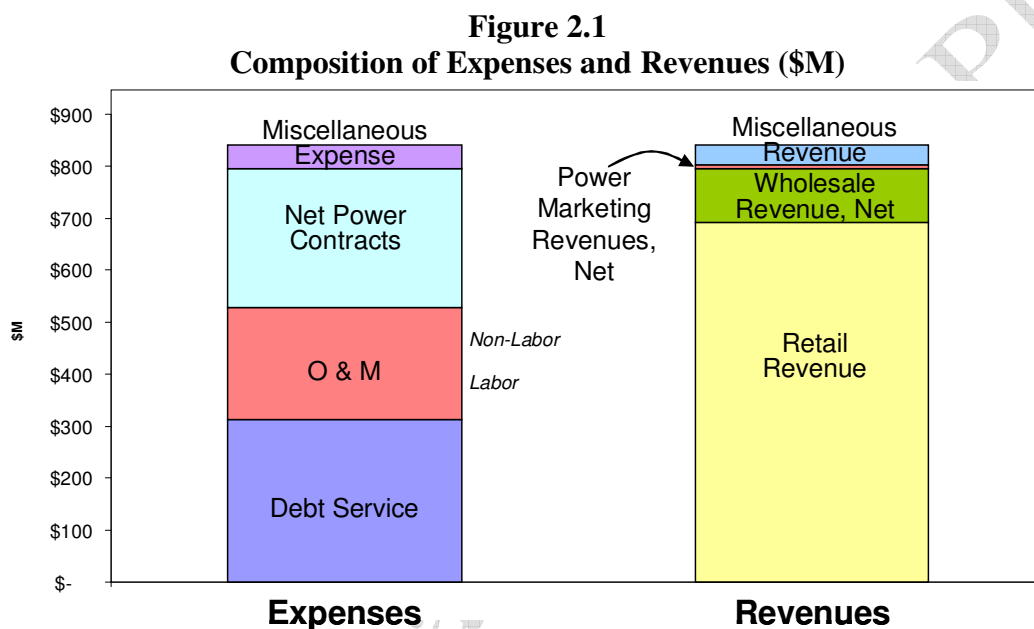
The City Light financial forecast is based on detailed projections of major revenue and expense categories that determine the Utility's annual revenue requirement and the resulting rates. The table below outlines these categories, their relative size and volatility. The categories are ordered such that areas with the greatest potential to change rate trajectory are discussed first. Each of these categories will be discussed in detail later in this section; the column at the left denotes the sub-section for each category.

Table 2.1: Components of Revenue Requirement (\$M)

Section	Element	2012 Expenses \$M	2012 Revenue \$M	Impact on Rates	Volatility
2.1	Capital Program (CIP) and Deferred O&M	\$0		Indirect (Debt Service)	High- Large impact on rates, but indirectly and lagged- via debt service
2.2	Debt Service (Coverage)	\$312		Large	Medium – Interest rates are an uncertain component, but bond issues are determined by operational decisions.
2.3	Non-Power O & M	\$216		Large	Medium – Some volatile components (city allocations, pensions, healthcare) but changes are driven primarily by program decisions, not uncertain factors.
2.4	Net Power Contracts Expense	\$266		Large	Medium— Most contract terms are known, but some costs (such as BPA) have long-term uncertainty.
2.5	Net Wholesale Energy Revenue		\$102	Medium/ High	High – Generation volumes and market prices are major unknowns.
2.6	Net Power Marketing Revenues		\$9	Small	Medium – Small source of revenue, but could swing by \$5-\$10 M depending on market opportunity.
2.7	Miscellaneous Revenue		\$39	Small	High—Property sales and one-time payments can be large, and are difficult to predict.
2.8	Rate Discounts, Uncollectibles, Taxes & Franchise Payments	\$48		Small	Low – Follows rates.
2.9	Retail Revenue		\$692	na	Low—% volatility is small, but because of sheer size of this category, the overall impact of small changes can be nontrivial.
	Total	\$842	\$842		

Data for the table and chart above is based on the 2012 retail revenue requirement.

The chart below illustrates the relative magnitude of revenue and expense components. Every utility, including City Light, has a unique profile of revenue and expense sources. Wholesale revenue is a larger component of revenue for City Light than for most utilities because of its low cost hydro generation resources and net surplus position--though its relative size has shrunk in recent years because of falling market prices. However, it is a far smaller percentage of total revenue compared to very hydro-centric public utilities such as Chelan PUD. On the expense side, debt service is a growing expense component since SCL's debt load is increasing; reasons for this are discussed later in this document.



Key Points:

- Major determinants of rates are debt service and coverage (paying bond holders for borrowed funds for past capital spending, and the additional collection for debt service coverage that funds current year capital expenditures), net wholesale energy revenue, power costs, and O&M.
- Labor costs are a relatively small portion of the overall revenue requirement (about 14-15%, or about 20% with benefits), which is the inverse of most other City Departments where labor costs are about 85% of their total budgets.
- Most items on the “Expense” side of the chart shown above are relatively (non-power O&M) or entirely (Debt Service) fixed, while Net Wholesale Revenue is highly variable (though the implementation of the Rate Stabilization Account will allow the Utility to depend on a budgeted amount of Net Wholesale Revenue).

2.1 Capital Program and Deferred O&M

The Utility develops and submits for City Council approval a 6-Year Capital Improvement Plan (CIP) that is rolled forward as part of the annual budget process. The 6-Year CIP is updated based on input from

capital project managers, and reviewed by SCL Officers. The charts shown below are budgeted amounts, which differ from annual cash requirements that are used in the rate forecast⁷.

As part of the financial baseline exercise described in this document, SCL Officers reviewed the six-year CIP projection for programs that could be deferred or eliminated without compromising current levels of service. In connection with this review, \$165 million of CIP spending has been removed from the baseline spending and rate projection.

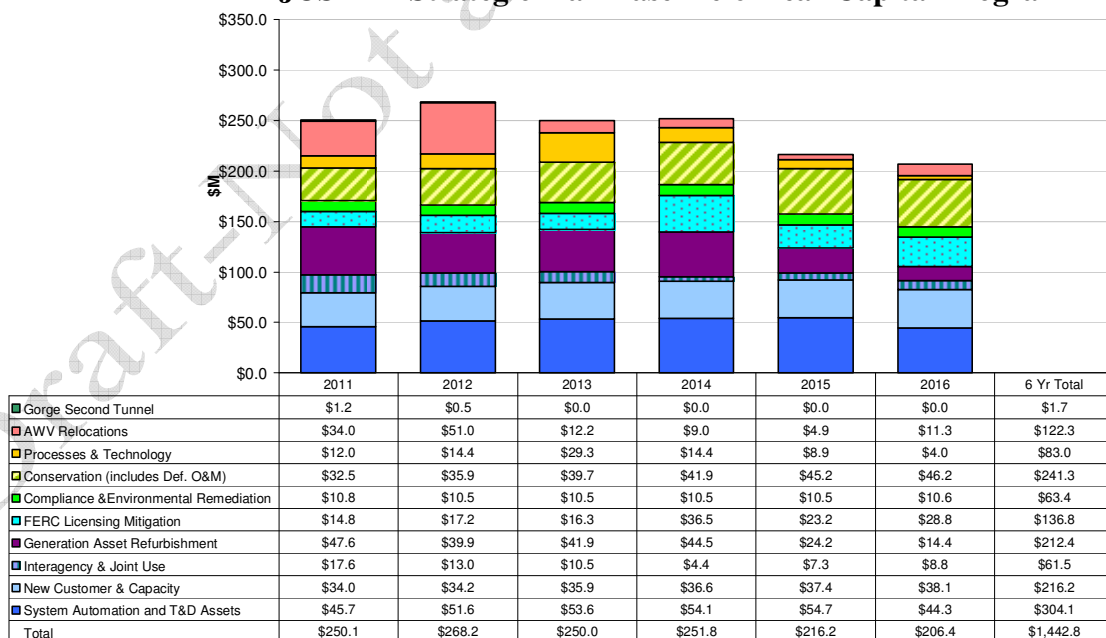
This spending category also includes Deferred O&M, which may be funded with debt like CIP. Deferred O&M is comprised of: Conservation, High Ross costs, project license costs for Skagit and Boundary environmental mitigation, and Endangered Species Act mitigation. Some deferred O&M spending is related to relatively non-controllable costs associated with the licensing of generation facilities. Conservation costs are more controllable, and are based on a forecast provided by the Conservation Division. The forecast reflects the expenditures necessary to comply with I-937, and as a result, expenditures in 2013-16 are higher than in the current 5-year Conservation Plan that runs through 2012.

This category also includes Contributions in Aid of Construction (CIAC) and grant funds, which are offsets to spending.. These are any payments received from outside sources to help pay for capital projects. CIAC sources are customers and private organizations that represent them, while grant sources are public entities such as federal, state and local government agencies. Forecasted grant funds are currently from a single source, Sound Transit.

The charts below show the revised \$1,443 million baseline CIP, which is defined as the Adopted 6-Year CIP for 2011-2016, plus strategic program changes specified by Officers. The changes net to \$165 million in capital program reductions over the Adopted Budget CIP.

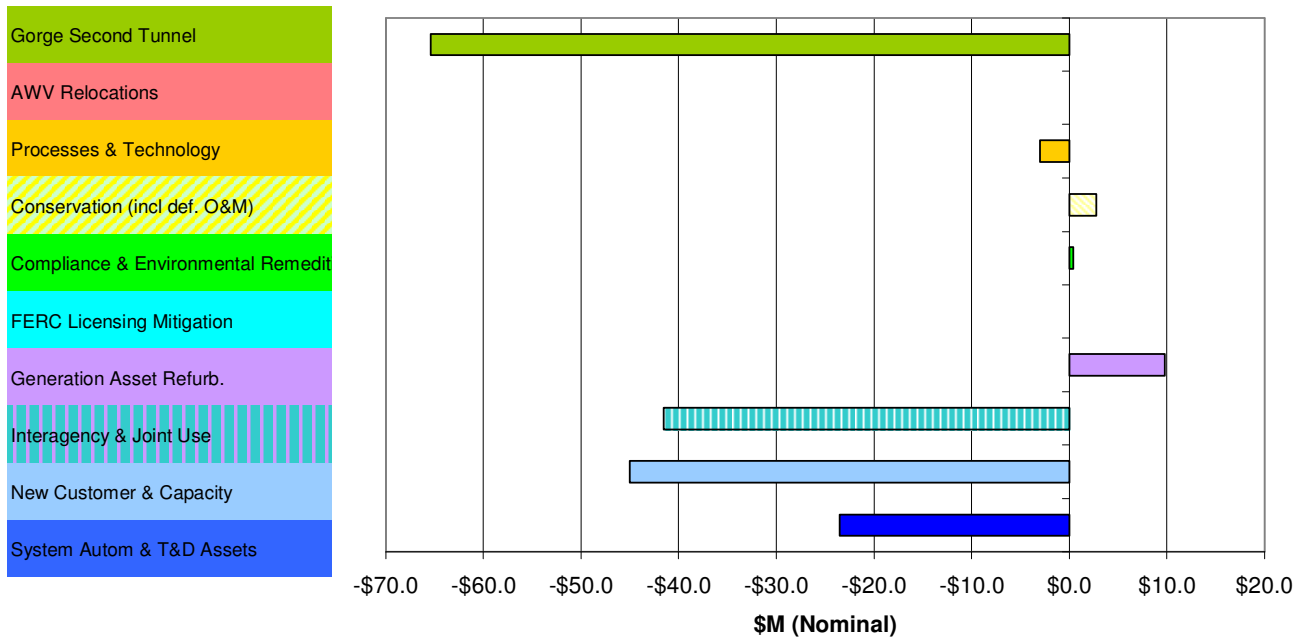
Figure 2.2

ADJUSTED Strategic Plan Baseline 6-Year Capital Program



⁷ Typically, cash dollars lag budget dollars somewhat, as budget dollars can be encumbered and carried forward to future years.

Figure 2.3
Strategic Plan Baseline CIP Changes from Adopted Budget



The following table contains high level descriptions of critical projects that are funded under the 6-year financial baseline CIP, and critical projects that are not funded. Note that the list of non-funded projects provided here is far from comprehensive. Potential new capital initiatives will be discussed in greater detail in the Strategic Plan.

Table 2.2: Customer Service & Energy Delivery (CSED) CIP Summary

Key capital programs included in financial baseline	Projected 6 year spending in Millions
<ul style="list-style-type: none"> Alaskan Way Viaduct utility relocations Replace obsolete customer information system with new system enabling utility to meet customer needs. Complex/summary bills and complex bills are currently generated by a manual process; new system will automate and provide easier rate design and implementation. Substation automation (pilot near Shoreline Substation and complete substation automation: automated switching to respond to system load issues, monitoring for condition tracking.) Recurring infrastructure replacement (e.g., poles, cable, transformer replacements) and customer connection funding will be continued at fund levels established in the 2011-2012 budget: <ul style="list-style-type: none"> Infrastructure - General Infrastructure - Cable Injection Infrastructure - Connections Infrastructure - Network Infrastructure - Poles Infrastructure - Substations Mobile Workforce Technology Implementation (workforce and customer service efficiency project, enables real time dispatch for planned and emergency work; transparency of work assigned to crews, work progress, and crew location) Distribution Automation (enhanced outage restoration) Completion of projects currently underway: <ul style="list-style-type: none"> Mercer Corridor West Relocation Work and Asset Management System Outage Management System 	\$136.2 \$13.2 \$15.5 \$434.7 \$84.1 \$36.0 \$142.4 \$49.3 \$46.2 \$76.7 \$3.6 \$10.1 \$1.6 \$8.8 \$0.1
Anticipated capital projects that are not included in the financial baseline	Projected Range of 6 year spending in Millions
<ul style="list-style-type: none"> Automated Metering Infrastructure (AMI): increases utility efficiency, enhances revenue through accurate measurement, ensures employee safety, allows automated disconnect for nonpayment, allows monthly billing. Puget Sound Area transmission congestion mitigation projects (partially funded by 3rd parties) North Downtown Substation (needed to meet increasingly dense load in the network and South Lake Union area) North Downtown Network (higher network rates for those customers would offset these costs) Electrification of transportation (significant penetration in the older neighborhoods will necessitate some investment, rail service) Feeder energy efficiency work (lowering voltage to capture energy efficiency, adjustment in real time to track closely to load) Asset Management (still ramping up) will likely reveal that the condition of certain elements of our infrastructure replacement program may require incremental funding. For example: <ul style="list-style-type: none"> Potential increased funding to replace cables identified by the cable injection program as not suitable for injection. 	\$80-\$120 \$40-\$60 \$150-\$200 \$125-175 \$10-\$15 \$50-\$85 TBD ~\$25

Table 2.3: Power Supply and Environmental Affairs (PSEA) CIP Summary

Key capital programs included in financial baseline	6 year projected spending in millions
<ul style="list-style-type: none"> Boundary Rebuilds for Units 55, 56, 53, 54, 51 and Diablo Rebuilds for Units 32 and 31 Complete other essential projects currently in design or construction at Projects, including Ross Rock Slide Area Improvements, headgate hoist room upgrades, electrical systems upgrades and minor improvement projects at Boundary, special work at Plants and Shops, access road and forebay paving, overflow dike improvements, continuation of Oil Containment Improvements, completion of Gen 20 Support Facility Rebuild, FERC mandated Ross Dam - AC/DC Distribution System Upgrade, and minor improvement programs at Skagit. Equipment and vehicle replacement program Conservation programs (includes deferred O&M) Boundary – Transfer Blocks 151-156 Rock Damage Mitigation Skagit Housing - demolition and upgrades Skagit Sewer - Ecology mandated, decommission treatment facilities Skagit energy conservation - retrofits for remaining buildings only Gorge Tunnel 2011-12 preliminary design work 	\$63.0 \$62.9 \$53.4 \$241.3 \$18.8 \$2.7 \$8.7 \$2.9 \$1.7
Anticipated capital projects that are not included in the financial baseline	Range of projected 6 year spending in Millions
<ul style="list-style-type: none"> Gorge Tunnel installation 	\$65.4

2.2 Debt Service

The capital program impacts rates through the debt service on bonds issued to pay for the capital projects. Debt service is calculated for all bonds outstanding and projected for the future. For existing bonds, principal and interest is based on actual bond parameters. For future years, the model assumes debt is issued whenever the operating cash balance falls below \$50 million, and the size of the forecasted bond issue is determined by the capital spending requirements for the subsequent 12 months. Therefore, the model assumes fairly frequent bond issues, about once a year, every year.

The following table shows total debt service, as well as debt service coverage. Because SCL financial policy calls for sufficient revenue to cover debt service 1.8 times, one dollar in debt service impacts revenue requirement by 1.8 dollars. Therefore, the coverage requirement is the amount that is indicative of the magnitude of rate impact.

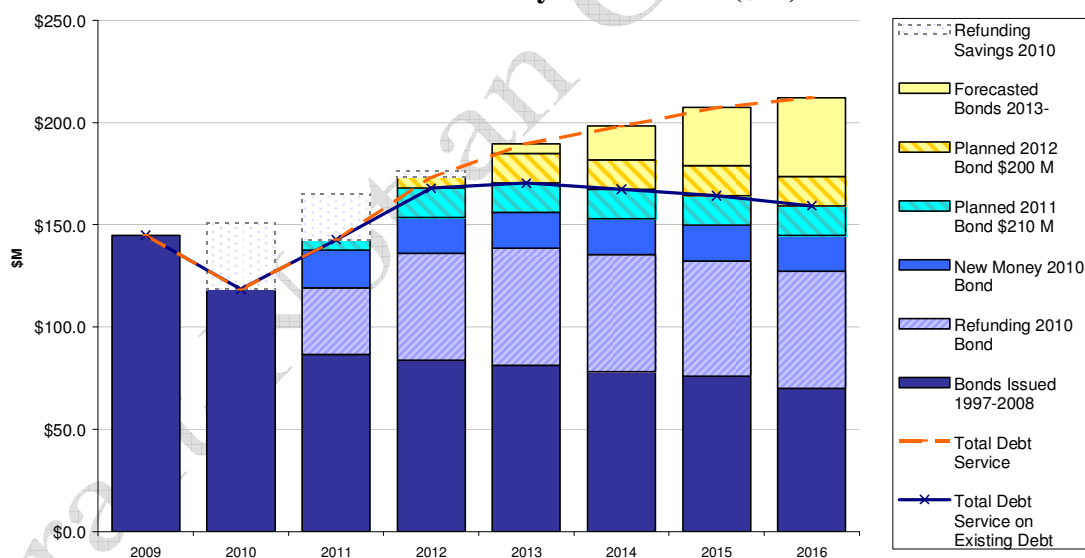
Table 2.4
Debt Service and Coverage Requirements (\$M)

\$M	2009	2010	2011	2012	2013	2014	2015	2016
Debt Service	\$144.9	\$118.4	\$142.7	\$173.2	\$181.7	\$197.1	\$206.8	\$212.9
Debt Service with 1.8x Coverage	\$260.8	\$213.1	\$256.8	\$311.7	\$327.0	\$354.8	\$372.3	\$383.2

It is assumed that any future bonds will be issued at a 5% interest rate, which approximates the historical interest rate on debt already issued. As actual bond issues near, the interest rate is updated to reflect market rates. The upcoming 2011 issue has an expected interest rate of approximately 5%.⁸

The chart below shows that debt service is rising. There are several reasons for this. First, low wholesale revenues in 2009 and 2010 meant that a larger portion than normal (77%) of capital requirements for these years were financed via bond proceeds. This increased borrowing in 2010 and 2011 over expected levels, resulting in increasing debt service beginning in 2012. Second, the recent financial policy change from 2.0 to 1.8 times coverage means that going forward City Light will finance a larger portion of CIP with debt than under 2.0 times coverage, increasing debt service. The reason for this is that the higher coverage ratio translates to higher retail rates, resulting in more cash from operations to fund CIP. Lastly, a large amount of debt was refinanced in 2010 to take advantage of low market rates. The \$57 M in savings were front loaded into 2010 and 2011 to provide cash for initial funding of the RSA, offsetting the rising debt service due to new debt until 2012-13.

Figure 2.4
Debt Service by Bond Series (\$M)



Key Points:

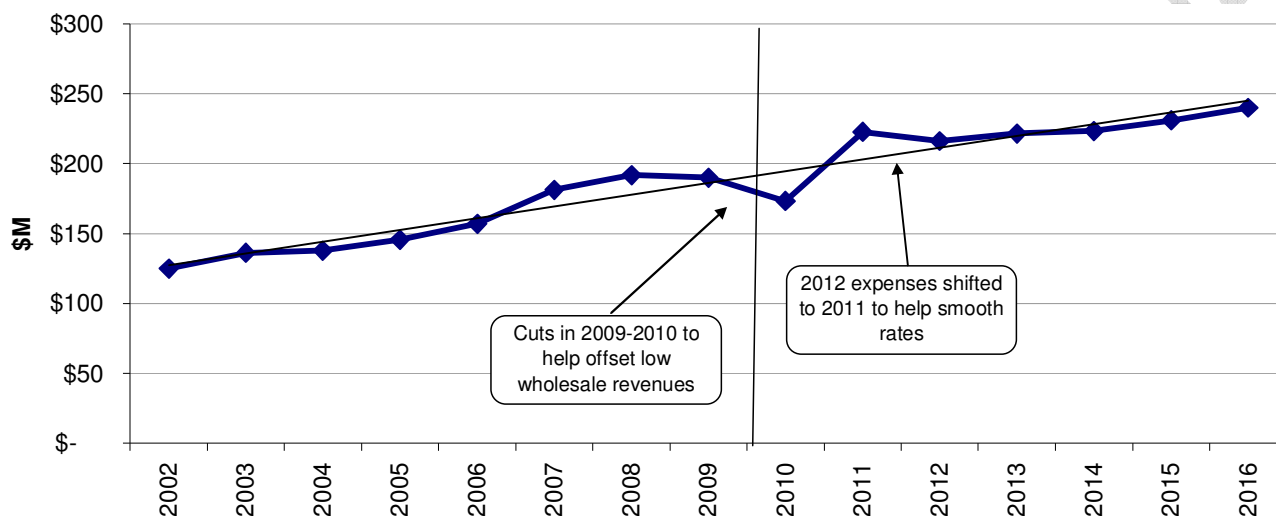
- Debt service is rising because of: (1) higher debt issues in recent years due to low wholesale revenue; (2) the financial policy change from 2.0x to 1.8x; and (3) bond refunding savings offsetting increases in 2010-2011.
- Despite rising debt service, City Light's debt to capitalization ratio is still decreasing.
- The 2010 bond refinancing saved rate payers \$57 M.

⁸ Pricing for the bond issue was completed on January 12, 2011, and the actual interest rate was slightly lower than 5%. The bond sale is scheduled to close on February 8.

2.3 Non-Power Operating & Maintenance Costs (O & M)

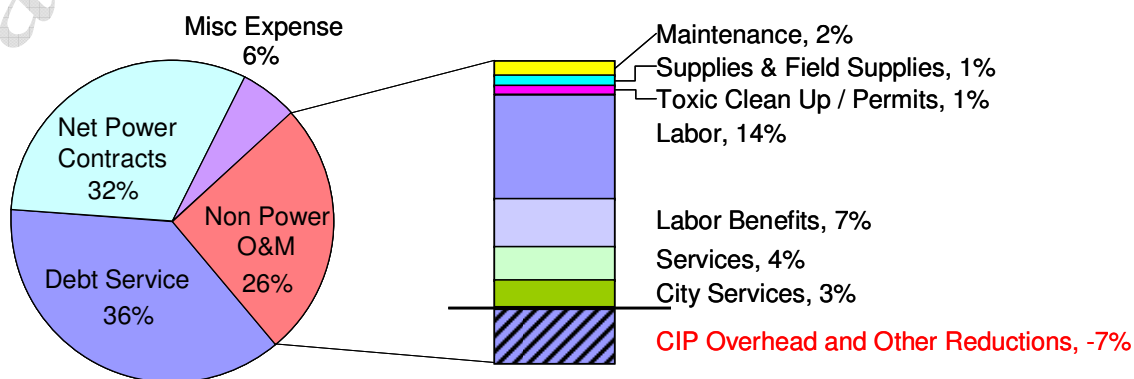
O&M in aggregate has grown historically at a fairly steady rate, and the forecasted trajectory for future years is comparable to the historical rate of increase. This is illustrated below in Figure 2.5, which shows actuals through 2009 and forecast values for 2010-2016, and an accompanying linear trend line. From 2002-2009, O&M increased annually at slightly less than 6%, while for 2011-2016 the annual rate of growth is slightly lower at 4%. O&M for 2011 and 2012 reflect the Adopted Budget, and 2013-2016 are forecast using inflation factors discussed below.

Figure 2.5
O&M Historical and Forecast



The pie chart in Figure 2.6 below shows non-power O&M as a portion of revenue requirement expenses (Figure 2.1) and the various components that make up non-power operating and maintenance (O&M) costs. Non-power O&M only makes up about a quarter of total expenditures, with the remaining majority being primarily debt service and power costs. The bar chart at the right shows the components of non-power O&M by budget expense type. The Budget includes labor overhead and other costs that are ultimately capitalized and excluded from operating expenses (O&M); therefore, they are deducted from the O&M forecast, as shown in the striped bar captioned in red.

Figure 2.6
Non-Power O&M by Category – 2012



Assumptions for inflators for various components of O&M are discussed in detail in Section 3, “Key O&M Assumptions (By Expense Type)”.⁹ Some components are assumed to grow at the overall inflation rate, or at a rate slightly higher than inflation. Others, such as medical benefits and field supplies, are expected to grow at rates higher than inflation. Note that though the O&M costs are forecast as specific dollar amounts, they are not a budget but merely point estimates representing a considerable range of cost uncertainty. Table 2.5 below summarizes the inflators used for various O&M components.

Table 2.5
Growth Assumptions for O&M Categories

Section	O&M Category	2013-2016 Growth Rate
3.1	Labor	CPI+1
3.1	Labor Benefits (medical, pension, etc.)	5.6%
3.1	Benefits - Business Units	CPI
3.2	Services	CPI
3.3	City Services, Payments & Rentals	CPI
3.4	Maintenance	CPI+1
3.4	Maintenance – Data Processing (IT)	3%
3.5	Supplies & Materials	CPI
3.5	Operating Supplies & Inventory (Field Supplies)	8%
3.6	Toxic Clean Up	Direct Forecast
3.6	Permits	5%
3.7	CIP Overhead and Other Reductions	na

CPI Forecast

City Light's inflation forecast is updated each year. Typically City Light uses the official City forecast for the next year or two, to align with City Budget assumptions. For out years, inflation is based on Dick Conway's forecast for the Puget Sound Region. Inflation assumptions for 2011-2012 are implicitly based on the inflation rates and COLAs modeled directly in the Adopted Budget, as mandated by the City.

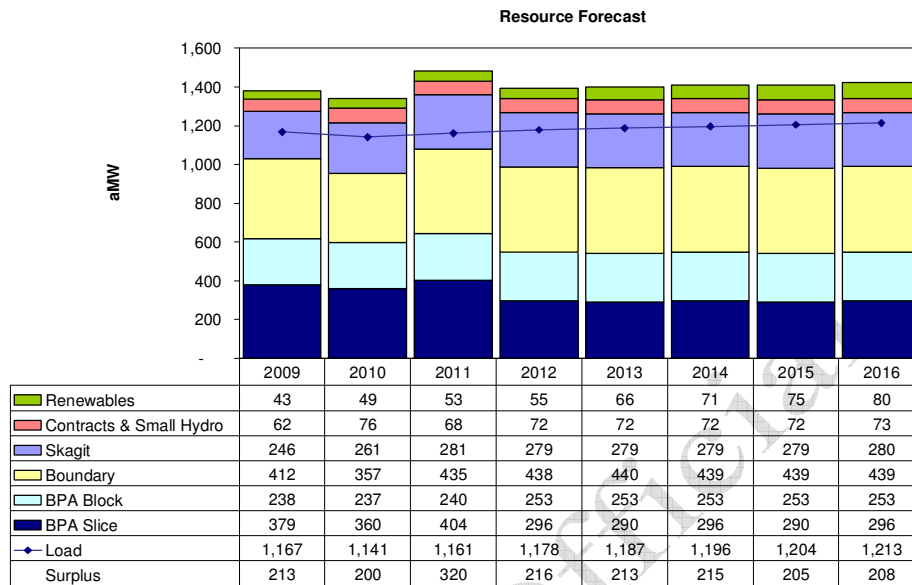
2.4 Power Contract Costs and Revenues

City Light serves customer energy demand through a variety of power supply sources. The three primary sources of supply are the Skagit Project and Boundary generating facilities, and a long term Bonneville Power Administration (BPA) power supply agreement. City Light's BPA agreement is comprised of both a fixed (Block) amount of power supply and a variable (Slice) component. As illustrated in Figure 2.7 below, these three sources make up over 90% of City Light's power supply portfolio. Figure 2.7 also illustrates that City Light has an anticipated surplus of power under normal water conditions.

⁹ Operating & Maintenance costs are forecast in the Utility's financial model in six categories: production, transmission, distribution, non-programmatic conservation, customer accounting and administration. These categories are based on FERC accounting codes to aid in tracking with accounting actuals and are not affected by any reorganizations that the utility and other organizations periodically undertake.

To assist in aligning spending with Officers' budget control areas, the Strategic Plan O&M baseline was developed using Budget categories, not FERC accounting categories. Establishing a crosswalk between the two views of the O&M budget for purposes of financial projections is an ongoing effort. This section will discuss O&M in terms of Budget categories, but because of the data conversion issue just noted, O&M spending is aggregated into a single line in some of the charts used in this document and in the Utility's financial forecast model.

Figure 2.7
Generation Resources (aMW)



In addition to owned resources, City Light has a variety of power supply and power sale agreements that supplement its portfolio, which are shown in Table 2.6.

Table 2.6
Power Contract Costs and Revenues (\$M)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Revenues								
BPA Credits	\$16.8	\$11.9	\$11.3	\$9.4	\$9.4	\$9.5	\$8.1	\$3.7
Priest Rapids	\$5.4	\$6.4	\$5.0	\$4.8	\$5.2	\$5.6	\$6.1	\$6.5
Boundary-Rel. Sales	<u>\$1.7</u>	<u>\$1.6</u>	<u>\$1.7</u>	<u>\$1.7</u>	<u>\$1.8</u>	<u>\$1.8</u>	<u>\$1.9</u>	<u>\$1.9</u>
Total	\$23.9	\$19.8	\$18.0	\$15.9	\$16.4	\$16.9	\$16.0	\$12.1
Costs								
Bonneville	\$164.6	\$169.3	\$163.9	\$163.9	\$166.0	\$171.5	\$173.8	\$179.4
Small Hydro	\$25.4	\$31.8	\$26.3	\$26.4	\$26.6	\$27.2	\$27.6	\$28.2
Renewables	\$20.0	\$24.4	\$27.0	\$30.6	\$30.9	\$31.2	\$31.5	\$31.9
Planned Renewables	\$0.0	\$0.0	\$1.8	\$3.7	\$14.4	\$19.6	\$24.9	\$30.7
Wheeling & Fees	<u>\$46.6</u>	<u>\$49.5</u>	<u>\$51.6</u>	<u>\$51.5</u>	<u>\$53.4</u>	<u>\$55.5</u>	<u>\$57.7</u>	<u>\$60.2</u>
Total	\$256.6	\$275.1	\$270.6	\$276.1	\$291.3	\$304.9	\$315.5	\$330.3

Excess or surplus power from City Light's power supply portfolio is sold into the wholesale power supply markets. The actual amount of power produced by hydro resources is very uncertain. Figure 2.7 reflects average water assumptions, so actual generation amounts could be greater or less than the amounts shown. City Light's low-cost generation portfolio has an average system cost of around \$20 per MWh,

which is well below the prevailing market price. The system cost of its individual resources, however, ranges greatly, from less than \$10/MWh to over \$60/MWh for some renewable resources.

Note that though owned resources such as Skagit and Boundary are shown in Figure 2.7 above, the bulk of the costs associated with operating these resources are not found in this section, but are instead O&M or CIP. Table 2.7 summarizes costs for contracted generation resources, and revenues from long-term power delivery contracts.

Key Points:

- Less power will be received from the new BPA contract starting in October 2011.
- BPA rates are subject to change every 2 years and are likely to increase at or above the rate of inflation through the study period. BPA power cost changes are automatically passed through to City Light customers.
- Transmission costs are likely to increase to address regional transmission constraints and decrease the risk to deliver power from the congested Puget Sound Area Northern Intertie (PSANI).
- Uncertainty over future Renewable Energy costs (“Planned Renewables” line in table above.

2.5 Net Wholesale Energy Revenue

City Light receives a substantial amount of revenue from surplus energy sales. Because of the volumetric uncertainty of hydro generation, City Light has acquired more power than it typically needed to meet retail demand on an expected basis. When hydro conditions are above the critical level, City Light sells the excess energy into the wholesale market.

Net Wholesale Revenue and the RSA Baseline

The amount of net wholesale energy revenue that we depend on when setting rates is specified by the Ordinance that established the Rate Stabilization Account (which is described in further detail below). The amount to be assumed is specified as the average of net wholesale revenue for the years 2002 to the present, unless otherwise adjusted by Council. For 2011-2012, our rates were set using this approach, and Council made certain reductions to better align the figure with our current forecast of wholesale revenues in those years. However, there is a gap between our current outlook and the amount of net wholesale revenue assumed in the rate calculations. The variance between these figures and City Light’s current forecast (which is lower) would be withdrawn from the RSA and would likely result in temporary RSA rate surcharges to replenish the RSA. For 2013 and future years, in this baseline financial projection we continue to assume the approach specified in the RSA Ordinance—the average of realized net wholesale energy sales from 2002 forward to the latest available year. The results are shown in the table below.

Table 2.7
Net Wholesale Revenue Actuals and RSA Baseline Assumptions
 (Bold values indicate actuals or Council Adopted figures)

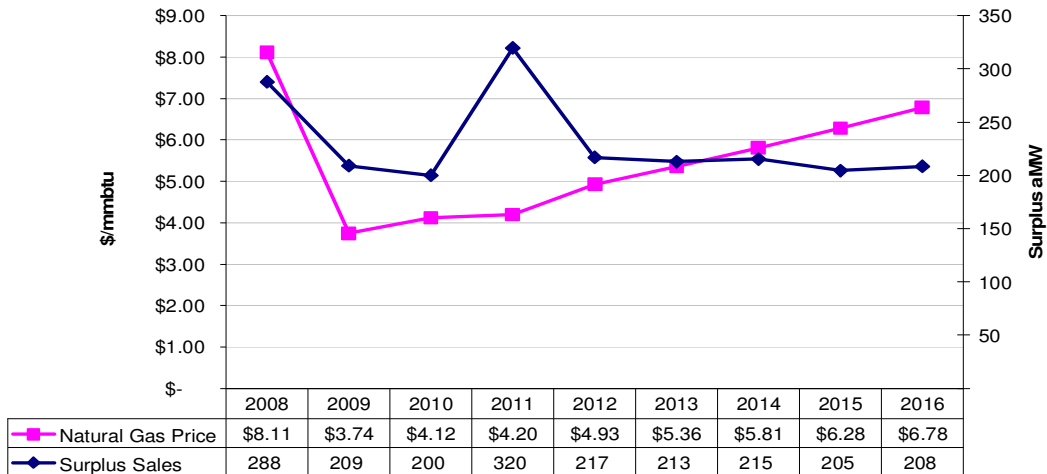
	Actual and Forecast Net Wholesale Revenue	Average of 2002 - Preceding Year	City Council Adopted Adjustments	RSA Baseline	Difference from Forecast
2002	\$89.6				
2003	\$113.4				
2004	\$113.6				
2005	\$87.4				
2006	\$140.1				
2007	\$137.3				
2008	\$134.4				
2009	\$68.2				
2010	\$51.8				
2011	\$66.8	\$110.5	-\$13.7	\$96.8	\$30.0
2012	\$72.1	\$105.8	-\$3.7	\$102.1	\$30.0
2013	\$71.2	\$100.0		\$100.0	\$28.7
2014	\$77.9	\$94.8		\$94.8	\$16.8
2015	\$80.3	\$92.8		\$92.8	\$12.5
2016	\$88.0	\$85.0		\$85.0	-\$3.0

Wholesale Energy Sales - Forecast Assumptions

Wholesale energy sales revenue is driven by volumes and prices. Wholesale sales volumes have been down sharply in the past couple of years. As shown in Figure 2.8 (below), 2011 hydro generation is expected to be at or possibly above normal due to cold and wet conditions; therefore, surplus energy is substantially higher than 2009 and 2010, which were both below-normal hydro years. However, it is still early in the runoff season and there is still substantial uncertainty in the 2011 forecast. Expected total net wholesale sales volumes drop starting in 2012 due to reductions in City Light's BPA long term power sale agreement. The figure below shows only expected volumes; the actual amount will vary dramatically with regional precipitation and resulting stream flow conditions.

In addition to sales volume uncertainty, wholesale energy prices are extremely volatile and unpredictable. Long-term wholesale power prices are driven primarily by changes in natural gas prices. Figure 2.8 shows actual natural gas prices for the period 2008 through 2010, and projected prices for 2011 through 2016. Predicting changes in energy markets continues to be one of the significant challenges facing City Light.

Figure 2.8
Wholesale Market Price and Surplus Volume Assumptions



Adopting a More Conservative View of Wholesale Energy Sales

Setting the wholesale revenue baseline for the RSA and rate setting is an important issue. Consistently setting the baseline too high will lead to ongoing RSA surcharges. Since only two years since 2002 have seen above-average hydro runoff, there is good argument for using a more-conservative-than-average water assumption when adopting a baseline for wholesale revenue. Tacoma Power and SnoPUD, which both have hydro-heavy generation portfolios similar to City Light's, set rates based on revenues assuming generation levels roughly mid-way between normal and critical water levels. Moving toward more conservative assumptions for setting net wholesale revenue expectations will be considered in the review of the current financial policies at the end of 2011.

Rate Stabilization Account

In 2009 and 2010, City Light's finances were greatly stressed due to large shortfalls in net wholesale revenues. The RSA was established in 2010 and became effective on January 1, 2011, to absorb variances in net wholesale revenue from projections. It is a new financial forecast component. The financial planning model compares the forecast of net wholesale revenue against the RSA baseline, and then withdraws cash from the RSA when actual wholesale revenue is less than the baseline, and deposits cash when the actual is greater than the baseline. If the RSA balance drops below specified levels (\$90 million, \$80 million and \$70 million), increasing rate surcharges take effect in order to refill the RSA. The RSA surcharges that would come about are not changes in base rates, but are temporary surcharges only that range from 0 to 4.5%. The advent of the RSA reduces financial risk for City Light, but if wholesale revenues fall below expectations either because of several bad hydro years, price stagnation, or overly optimistic forecasting, customers would be faced with ongoing surcharges.

Key Points:

- Sales volume is driven by conditions outside the control of SCL, including precipitation and resulting stream flow conditions.
- Wholesale energy prices are extremely volatile and unpredictable, and are also beyond the control of SCL.

- The RSA helps address volatility from Net Wholesale Energy Sales, but does not entirely solve the problem, especially if the wholesale revenue baseline assumed when setting rates is too high.

2.6 Net Power Marketing Revenues (Net)

In addition to the Net Wholesale Energy Revenues described above, City Light receives additional wholesale revenues through its power marketing efforts. These revenues are distinct from wholesale energy revenue because they are (mostly) the result of Power Management's optimization of its underlying power and transmission portfolio. As shown in the table below, these forecast revenues from these power marketing activities are expected to fall substantially starting in 2012. This is due to changes in City Light's long term BPA supply agreement and the need to use increasing amounts of City Light's assets to meet its retail load obligations, and reductions in REC revenues, since the RECs will be needed to meet I-937 targets.

Table 2.8
Power Marketing Revenues by Product (\$M)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Capacity & Reserve Sales	\$4.9	\$5.0	\$4.9	\$2.5	\$2.5	\$2.6	\$2.6	\$2.7
Transmission Sales	\$1.8	\$3.1	\$2.9	\$3.0	\$3.0	\$3.1	\$3.2	\$3.2
Other transactions	\$8.4	\$5.2	\$8.8	\$4.2	\$4.6	\$5.2	\$3.9	\$4.0
Total	\$15.2	\$13.3	\$16.6	\$9.7	\$10.2	\$10.9	\$9.7	\$10.0

Key Points:

- Power marketing revenues are expected to fall substantially starting in 2012.

2.7 Miscellaneous Revenue

The department realizes revenue from numerous other sources aside from those listed above. Larger sources are estimated based on the best information available. These include: sales of property, investment income, suburban undergrounding payments, operating fees and grants, distribution capacity charges, retail green power programs, power factor charges.

Table 2.9
Miscellaneous Revenue (\$M)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Sale of Property	\$1.0	\$1.7	\$2.5	\$2.3	\$1.1	\$1.1	\$1.2	\$1.2
Investment Income	\$4.1	\$4.0	\$4.4	\$9.8	\$12.8	\$15.3	\$16.8	\$16.2
Suburban Undergrounding	\$0.4	\$0.6	\$0.7	\$0.9	\$1.1	\$1.2	\$1.3	\$1.3
Operating Fees and Grants	\$1.7	\$2.3	\$0.3	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0
Distribution Capacity Charge	\$1.6	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2
Green Power Programs	\$1.4	\$1.4	\$2.5	\$3.1	\$3.2	\$3.3	\$3.3	\$3.4
Power Factor Charges	\$2.6	\$2.5	\$2.5	\$2.6	\$2.6	\$2.6	\$3.0	\$3.0
Other	\$21.3	\$23.2	\$21.2	\$21.6	\$22.1	\$22.7	\$23.2	\$23.7
Total	\$34.1	\$35.8	\$34.4	\$40.6	\$43.2	\$46.4	\$49.0	\$49.2

Property Sales are major unknown since the Utility has a large portfolio of surplus land, and a single sale could be worth millions of dollars. Property sales are generically assumed at about \$1 M per year in out-years. The baseline estimate of revenues from land sales is conservative, and does not include a potential \$30 million property sale (8th & Roy St.) that City Light's Real Estate Division is tentatively projecting for 2014. A sale of this size would substantially reduce revenue requirement for that year.

Miscellaneous revenue sources are indexed to simple indicators such as inflation or number of accounts. These include: late payment fees, damage, property rental income, transmission attachments and cell sites, pole attachments, account change fees, and reduced current diversion.

Key Points:

- An expedited process to sell surplus properties could generate revenue to reduce pressure on rates. Current property disposition process is extremely lengthy, reducing revenue opportunities that could potentially reduce pressure on rates.
- For 2010, City Light identified numerous opportunities to increase miscellaneous revenues, and have incorporated these increases into the forecast.

2.8 Rate Discounts, Uncollectibles, Taxes and Franchise Payments

There are a number of costs that tend to increase steadily with rates. These include the cost of discounts for rate assistance for low income customers, uncollectible revenue, and State and City Taxes. These are all modeled as a percentage of revenues. Payments to Suburban Franchises are also very stable and are determined by long term agreements with the various franchise areas.

Table 2.10
Composition of Expenses and Revenues (\$M)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Rate Discounts	\$5.4	\$6.5	\$6.8	\$7.2	\$7.5	\$7.9	\$8.3	\$8.7
Uncollectible Revenue	\$5.3	\$5.9	\$5.8	\$6.2	\$6.5	\$6.9	\$7.2	\$7.6
State Taxes and Franchise Payments	\$28.6	\$31.3	\$33.0	\$35.1	\$36.3	\$37.8	\$39.0	\$41.3
City Taxes	<u>\$33.7</u>	<u>\$38.7</u>	<u>\$41.0</u>	<u>\$44.1</u>	<u>\$45.8</u>	<u>\$48.0</u>	<u>\$49.7</u>	<u>\$52.9</u>
Total	\$72.9	\$82.3	\$86.7	\$92.6	\$96.0	\$100.6	\$104.3	\$110.6

2.9 Retail Revenue

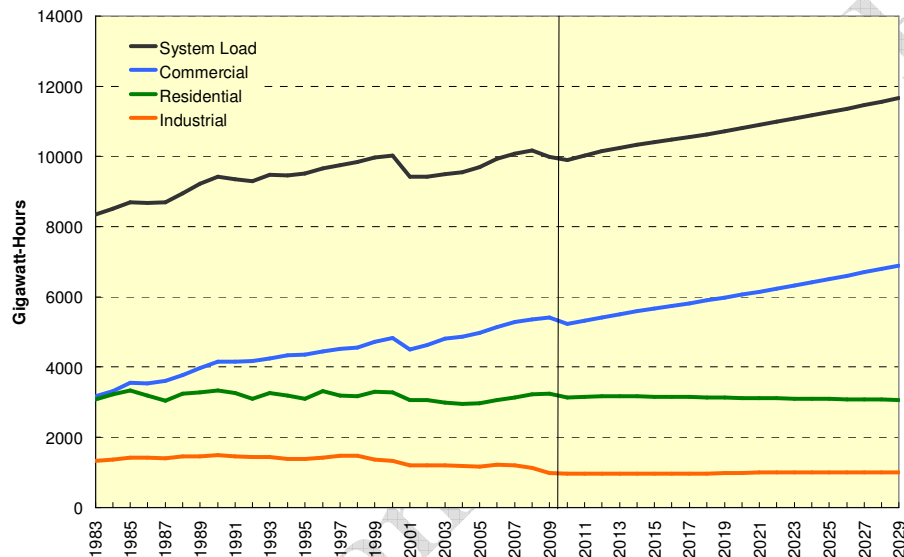
Sales revenue from City Light retail customers provide approximately 80% (over \$700 million annually) of the total revenue necessary to run the Utility's daily operations with the balance of operating revenue supplied from net wholesale energy sales and miscellaneous sources.

Retail revenue is calculated based on a retail load forecast that separates demand by customer rate class. For the years which have council-approved rates (through 2012), retail revenue is the product of the adopted rates and demand. For future years, retail revenue is determined by the calculated revenue requirement. (Revenue requirement is the total cost to operate the utility, less non-retail revenue).

System Load

City Light's historical and projected total retail customer load is shown in the table below for the period 1983 through 2016. Based on the April 2010 official long term load growth forecast, City Light's long term growth rate is expected to be quite modest, at less than 1% per year. As illustrated in the graph below, most if not all of the load growth is expected to occur within the commercial sector. The effects of the recent recession and slow economic recovery can especially be seen in the industrial and residential sector. This forecast is updated annually with based on customer information and economic assumptions. The load forecast assumes conservation levels as forecast in the Five Year Conservation Plan, and does not assume additional conservation or load reductions from rate design changes or any other initiatives.

Figure 2.9: Load Forecast by Customer Class (GWh)



Key Points:

- Load is expected to grow slowly at < 1% per year due to Seattle's aggressive conservation efforts, and the relatively mature market that the utility serves.
- Load can change at rates outside of these bounds if a larger customer leaves or enters City Light's service territory, or if the Seattle economy grows faster or slow than the forecast assumed here.

3 Key O&M Assumptions (By Expense Type)

This section provides additional detail about the significant components of the SCL O&M budget, including discussion of historical cost trends, and a forecasted growth rate for years 2013-2016, for which budgets have not yet been adopted.

3.1 Labor and Benefits

O&M labor and benefit costs represent only approximately 15% of City Light's overall revenue requirement as shown in Section 2 (labor costs are about 14%, benefit costs about 6%, prior to assigning a portion of these costs to the capital improvement program, as described in Section 3.7). Non-power O&M costs comprise about one-quarter of the Utility's annual revenue requirement, and labor & benefit costs represent about 60% of those costs (again prior to assignment of a portion of those costs to the CIP).

89% of the Utility's workforce is represented by a labor union. The agreements with the unions specify cost of living adjustments ("COLA") typically based on 100% of CPI for the next 1-3 years. The labor agreements are negotiated by the City. Overall labor costs are the product of the number of staff (headcount) times the unit costs.

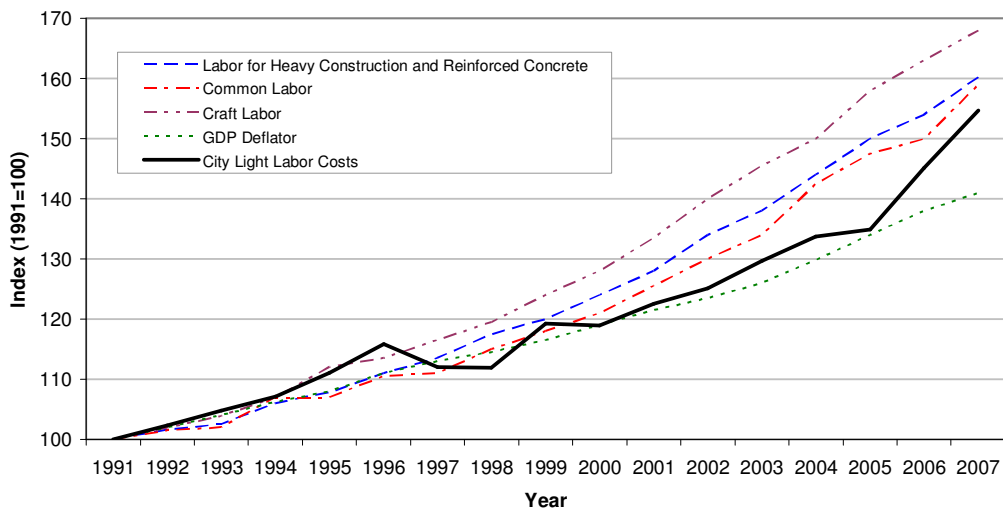
Headcount

Historically, FTEs have declined since their high of 2077 in 1992, reaching a low of 1734 in 2005. Staffing increased to 1882 in 2008 due to the addition of skilled trade positions to hire for the apprenticeship program to replace high number of attritions and several prominent programs including Asset Management and Conservation. Headcount was reduced in the 2010 and 2011 budgets as part of an effort to mitigate rate increases in those years. The baseline assumes that FTEs remain constant at the 2011 level of 1824 employees. The budget assumes a position vacancy rate of approximately 4%.

Labor Costs

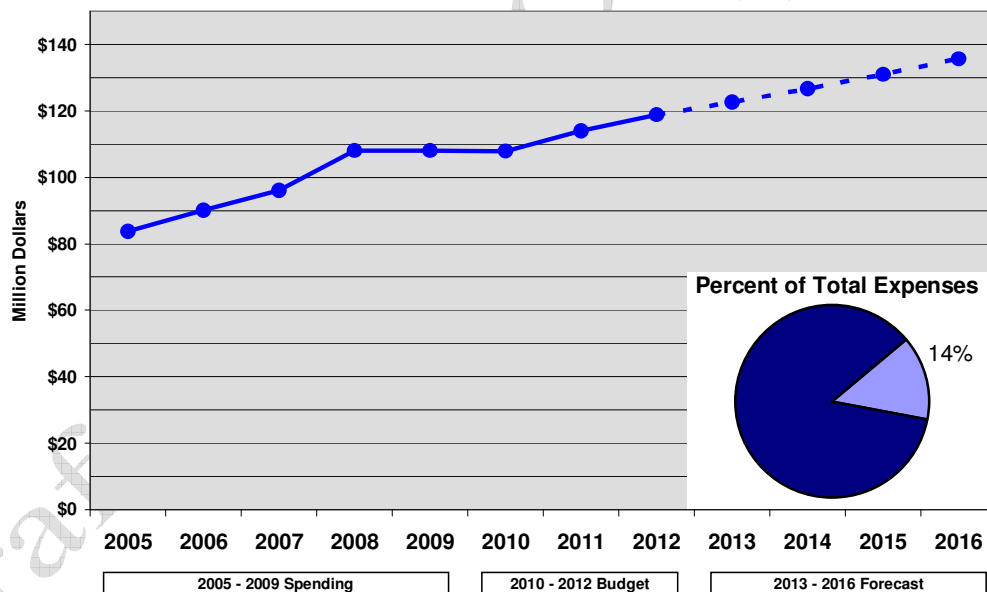
Labor costs are assumed to increase at the rate of inflation, plus 1%. This assumption is based on approximate historical trend for SCL wage rates observed from 2000 to 2008. Labor costs related to most staff classifications have tracked the CPI, but labor costs for certain classifications (Lineworkers, Power Marketers, Information Tech. Professionals, and Strategic Advisors) increased at rates slightly above CPI. SCL's experience in labor costs for certain categories increasing above the rate of inflation is consistent with broader industry experience, as shown by the following chart. SCL competes with other utilities for staff in many classifications.

Figure 3.1
National Average Labor Costs Index¹⁰ vs. City Light Labor Costs



Composite labor costs experienced and projected are shown in the following chart.

Figure 3.2
Labor O&M Historical and Forecast (\$M)



Explanation of significant changes:

- Increases from 2005 to 2009 resulted from more effectively recruiting and filling vacant budgeted positions. The improvements in City Light's hiring processes decreased the actual vacancy rate from 11.6% to 8.8%.

¹⁰ Source: http://www.edisonfoundation.net/Rising_Utility_Construction_Costs.pdf

- Increases from 2007 to 2009 resulted from increased hiring for the apprenticeship program, Conservation and Asset Management Program.
- Decreases from 2009 to 2010 resulted from hiring freeze, COLA freeze, and furloughs for some employees.

Risks and Unknowns related to this spending category include:

- Attrition in key utility workforce segments due to retirements and other factors could affect wages
- Demand for skilled trades people outstrips supply, increasing wages
- Increases in staffing may be necessary to comply with future federal/state regulations. The following areas have required additional resources in the past, and additional requirements could be forthcoming: (1) NERC Compliance (plants & power operations); (2) FERC - Increase in Fees and Regulations; (3) I-937 - State mandated Renewable Energy requirements; (4) Carbon Legislation/Cap and Trade

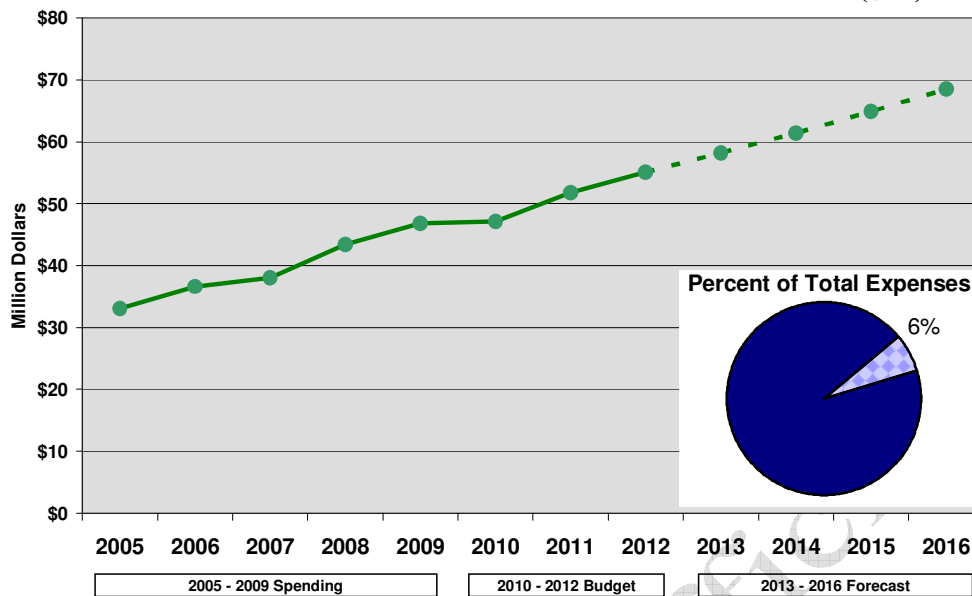
Miscellaneous Benefits

Includes special clothing, meals, and incentive payments specific to business units. These are a small portion of O&M (<\$1 million per year) and are assumed to grow at inflation.

Labor Benefits

Labor benefits include pensions, social security (FICA), Medicare costs, industrial insurance, unemployment compensation, medical-dental-vision insurance, the employee assistance program, long-term disability insurance, life insurance and death benefits. The table below includes the cost categories that account for 99% of labor benefits costs of about \$50 million per year. It is clear that these benefits have not increased at a steady rate, but instead increase or decrease abruptly. Some of the change is due to number of staff, while the rest is due to underlying cost changes. Just under half of the total labor benefits are in the medical-dental-vision insurance category. The average annual compound growth rate for all labor benefits costs is 6% over the 2008-2012 periods. However, the weighted average growth rate from 2011 to 2012 is 7%. Considering that the highest percentage growth values are in pensions (due to underperformance of City investments) and medical-dental-vision insurance, it seemed reasonable to assume the higher escalation rate of 7% per year for 2013 and beyond.

Figure 3.3
Labor Benefits O&M Historical and Forecast (\$M)



Explanation of significant changes:

- Increase from 2005 to 2009 resulted from an increased number of filled positions that are paid labor benefits.
- Changes in from 2008 to 2010 resulted from increased workers compensation costs and medical/dental cost increases.
- Investment returns were adversely affected by the 2008/2009 recession, necessitating an increase in the City's contribution rates from 8.03% of payroll in 2010 to 10.03% of payroll by 2012.

Risks and Unknowns related to this spending category include:

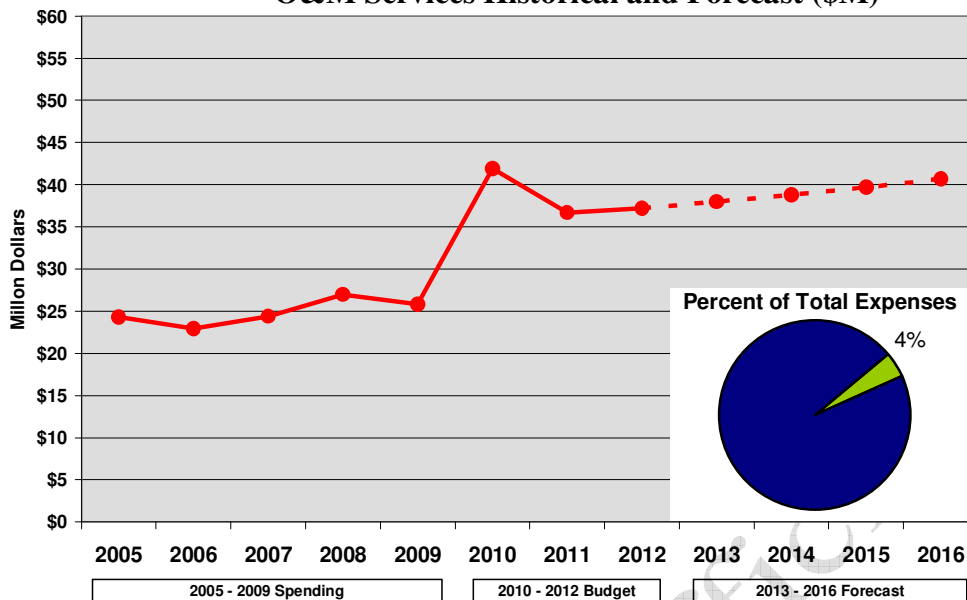
- Pension costs depend on uncertain investment returns. Additional increases are possible.
- The effect of healthcare reform on medical costs incurred by the Utility under the City's healthcare plans is uncertain, but rising costs are likely.
- Results of labor negotiations could increase costs and offsetting productivity improvements would be needed to offset increased expenses.

3.2 Services

Services include various engineering, architectural, data processing and professional services contracts, training and travel expenses and comprise approximately 13% of the O&M budget. Services are assumed to grow with inflation (CPI).

Historically, spending in this category has grown at approximately 1.2% annually from 2005-2009, as illustrated by the following chart:

Figure 3.4
O&M Services Historical and Forecast (\$M)



Explanation of significant changes:

- Increases from 2007 to 2010 resulted from the addition of specific programs that required significant service contracting. These programs include Asset Management and Outage Management which have utilized contracting to provide software-specific implementation services (knowledge not resident within the utility). The increase in the conservation program reflects payments for customer energy efficiency improvements.

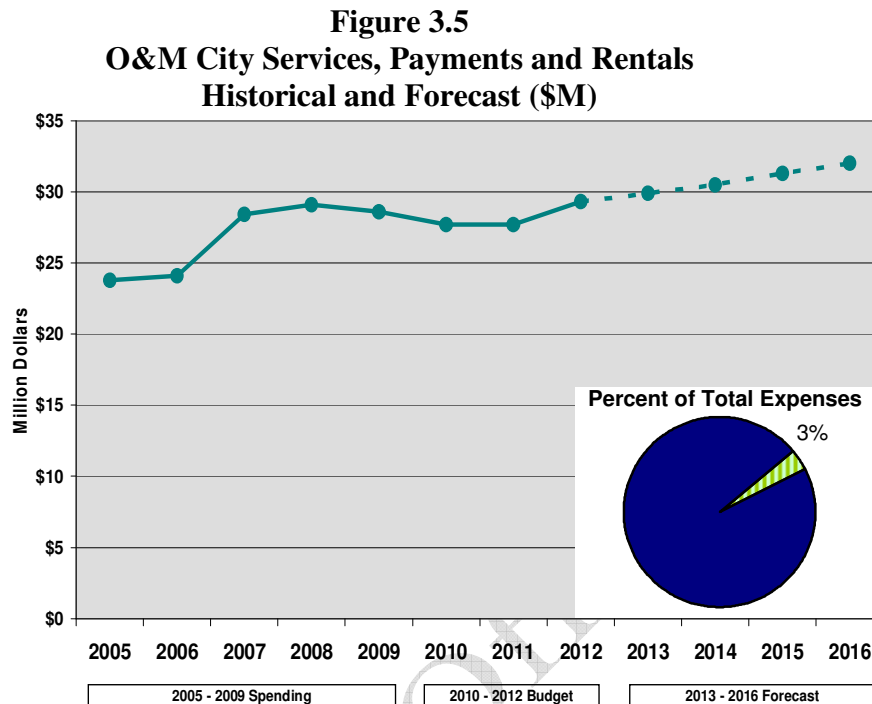
Risks and Unknowns related to this spending category include:

- The level of travel/training has been constrained below a sustainable level during 2009/10, and not restored in 2011. Additional spending in both areas is likely warranted and may be necessary. For example, should any federal or state issues arise that might directly impact the utility; this could require additional travel to lobby for the utility's interests. This is unpredictable at this time as the new Congresses in Washington, D.C., as well as in Washington State, begin to unfold their priorities in January 2011.
- The cost of new IT system implementation and maintenance costs could increase at greater than inflation.

3.3 City Services, Payments & Rentals

Includes lease cost for the Seattle Municipal Tower (SMT), payment to SPU for call center, Department of Information Technology (DOIT) costs, and other City Cost Allocations, approximately 11% of total 2011 spending. SCL pays City Cost allocations for a variety of services based on an allocation methodology or for the cost of the direct services. City Payments and Rentals are assumed to grow at the rate of inflation (CPI).

Historically, spending in this category has changed approximately 1.3% annually from 2005-2009 due to reductions in City Service costs, as illustrated by the following chart:



Explanation of significant changes:

- Increase from 2006 to 2007 resulted from space rent increases for the Seattle Municipal Tower that City Light leases from the City.
- Increases in 2009 are due to City IT cost increases (updates to Microsoft Office and Exchange email migration) and City vehicle maintenance cost increases.
- Decreases in 2010 and 2011 due to spending reductions across the City

Risks and Unknowns related to this spending category include:

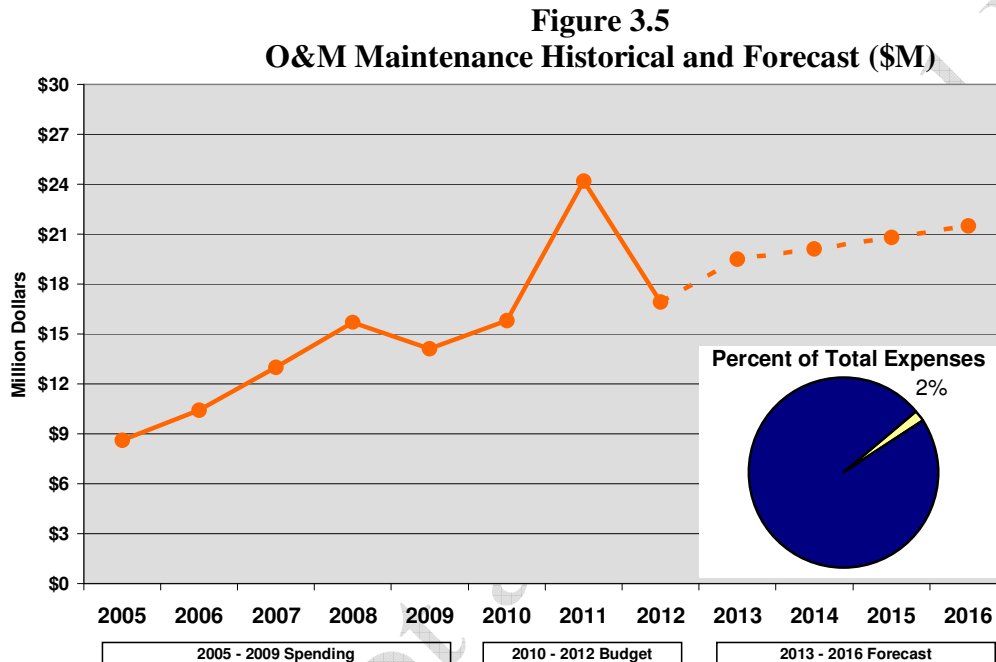
- Changes in the allocation methodology that the City Budget Office uses to allocation costs for shared services.
- Significant new expenditures or upgrades in shared services. For example, all City Departments use a common general ledger system, called “Summit”. An upgrade of this system will be required in the next several years, with a charge to SCL of \$2M-\$3M anticipated. This represents about 1/3 of the total cost to the City to upgrade Summit. How this would be charged has not yet been determined.
- Vehicle and Equipment maintenance: City Light is dependent on vehicle and equipment maintenance performed by the Fleets and Facilities Department. City Light is then billed for the completed work. To some degree the timing and costs of these repairs is out of City Light's control. More work is needed in this area in order to manage and control these future costs.

3.4 Maintenance

The maintenance category includes costs paid to vendors for tree trimming, facility maintenance, IT equipment maintenance and distribution system maintenance outside costs. It comprises 9% of total 2011 budgeted spending.

General maintenance is assumed to grow at $\text{cpi}+1\%$, to reflect contracted labor costs growing at a rate 1% higher than inflation. Maintenance for IT is assumed to grow at 3%, which is based on the observed historical rate.

Historically, spending in this category has changed approximately 12.8% annually from 2005-2009.



Explanation of significant changes:

- Increases from 2005 to 2008 are a result of increased spending for powerline clearance.
- Decreases in from 2009 to 2010 are a result of budget reductions to the powerline clearance budget and power production facility maintenance budget. These reductions were not sustainable and restored in 2011.
- Increases in Power Production maintenance costs of approximately \$3.2M for O&M Maintenance from 2010 to 2011. An increase of \$1.8M resulted increased allocation for City vehicle maintenance and repair.
- Increases for vegetation management of transmission lines of \$1.0M from 2010 to 2011
- Increases in 2011 IT system maintenance and the reshaping of IT costs to constrain 2012 rate increases, resulted in approximately \$5.5M in added costs to 2011. This includes significant increases in Oracle and Microsoft product maintenance costs.

Risks and Unknowns related to this spending category include:

- Risks of additional maintenance costs for aging distribution infrastructure will be identified as a result of Asset Management work.

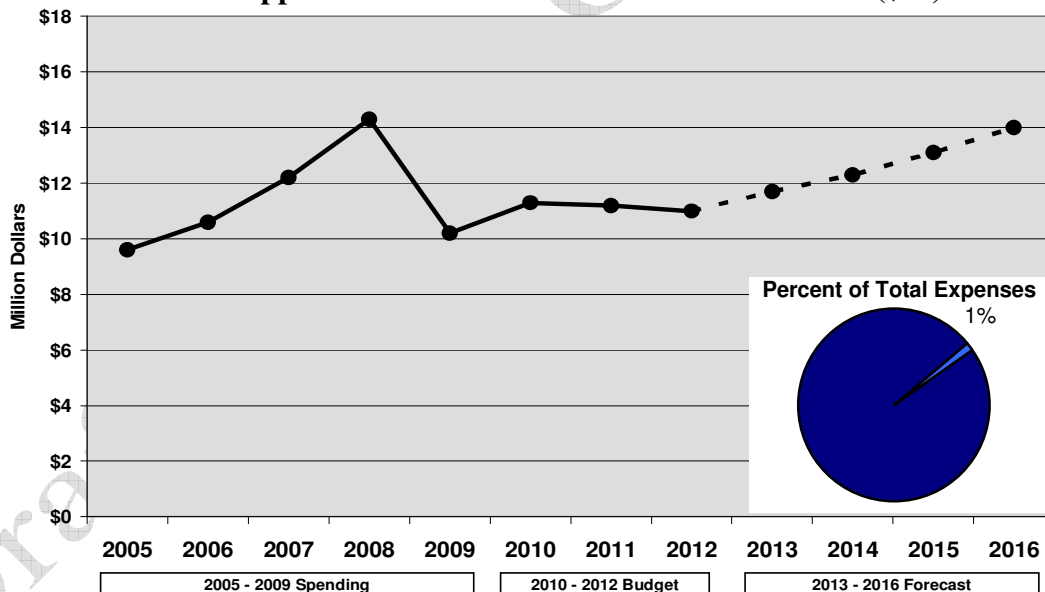
- Risk of major IT system costs increasing greater than inflation (such as CCSS - Customer Billing System replacement)

3.5 Supplies & Materials

Supplies and Materials includes costs for IT equipment and software, fuel costs, and inventory materials for distribution and generation systems. General supplies and materials, including the first two components noted above, were 1% of the O&M budget for 2011, and are assumed to grow with inflation.

Field Supplies and Inventory are 3% of O&M costs in 2011, and are assumed to grow at 8% per year, a conservative estimate that reflects rising costs of copper and steel--two commodities used extensively in electrical equipment. An analysis of Producer Price Indices for copper from the Bureau of Labor and Statistics for the period July 2002-October 2010 showed prices to be highly variable, with price index changes from October of one year to October of the next year ranging from -2% to +76%. The change for that period of 2009-2010 was +19%. An analysis of the same price indices for cold rolled steel also showed extreme variability, with price index changes from October of one year to October of the next year ranging between -15% to +42%. The change for that period of 2009-2010 was +10.4%. Over a recent 12-month period, City Light negotiated a generator rewind contract, which will be carried out using large quantities of both copper and steel; over the negotiation period, the price increased by \$1 million over an initial price of \$15 million, or 6.7%.

Figure 3.6
O&M Supplies and Materials Historical and Forecast (\$M)



Explanation of significant changes:

- Increases from 2005 to 2008 resulted from increased operating supply costs for inventory purchases and IT equipment cost increases.
- Decreases from 2008 to 2009 are a result of reduced purchases of supplies and materials. Maintenance work was temporarily deferred to achieve O&M savings targets for 2009.

Risks and Unknowns related to this spending category include:

- A rebounding economy and/or increased inflation could drive up commodity costs.

3.6 Permits, Injury and Environmental Claims

Environmental claims include payments for costs associated with environmental cleanup, employee injury claims, and customer claim costs. Permits describe taxes and fees such as payments to FERC¹¹. Permit fees make up about 3% of O&M, and environmental clean up costs are 1%. Workers compensation injury claims are not included in this category and are budgeted with industrial insurance pooled costs in the benefits category.

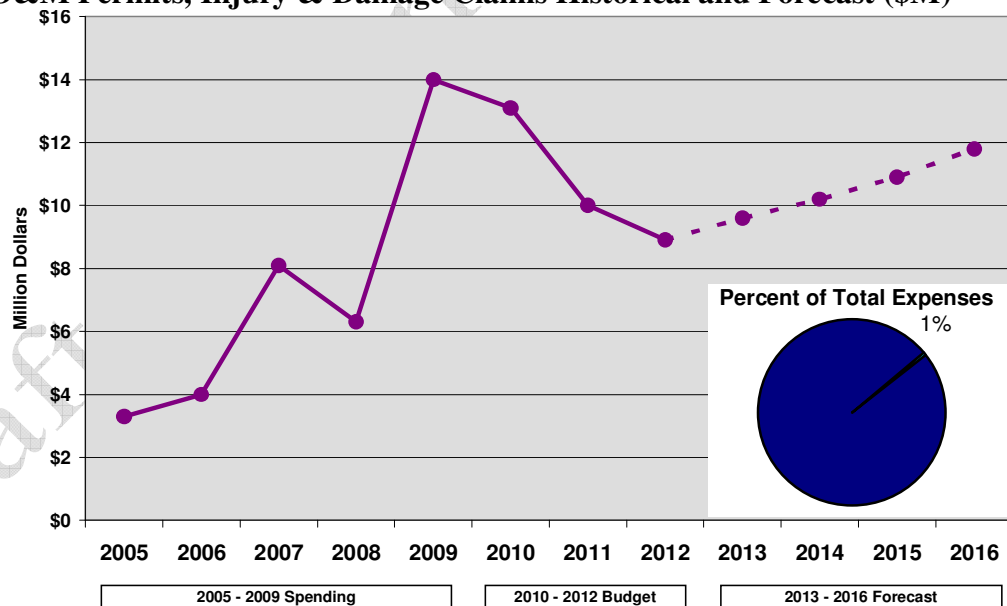
For 2013 – 2016, Permit costs are assumed to grow at 5%. Environmental clean up does not escalate like other O&M, instead it is projected directly based on work completed and known obligations.

Table 3.1
Environmental Clean Up Forecast (\$M)

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Environmental Clean Up Expenses	\$ 5.59	\$ 1.49	\$ 6.68	\$ 2.12	\$ 1.77	\$ 1.53

Historically, spending in this category has grown at approximately 64.8% annually from 2005-2009, as illustrated by the following chart:

Figure 3.7
O&M Permits, Injury & Damage Claims Historical and Forecast (\$M)



¹¹ FERC fees are also discussed in Section 2.4 since they are forecast as part of power costs (not O&M) but are also discussed along with other permit costs in this section because this is how they are budgeted.

Explanation of significant changes:

- Increases from 2006 to 2007 resulted from legal settlement for employee damage claims.
- The increase from 2008 to 2009 resulted from increased environmental claim costs for the Duwamish cleanup and increased FERC fees.

Risks and Unknowns related to this spending category include:

- Allocation between years of existing/known cleanup costs is uncertain and total Duwamish cleanup costs could change.
- City Light could experience upward pressure on meeting existing or new environmental compliance cleanup and regulations.
- Potential for large employee or customer damage claims that have not been anticipated. City Light has emphasized creating a culture of employee safety and established Grass Roots Safety Teams in 2005 to reduce work related injuries.

3.7 CIP Overhead and Other Reductions

As mentioned earlier in Section 2.3, the O&M Budget actually includes some labor, benefits, and supplies and materials costs that are ultimately categorized as part of CIP or deferred O&M. The forecast includes an estimate for these overheads associated with CIP and deducts them from the budgeted O&M, which is shown in Table 3.2 below.

There are also several other minor costs that are included in the O&M budget but are actually categorized as power costs in the forecast. Examples are Greenhouse Gas Offset purchases and Water for Power fees. These minor adjustments are also included in the amount shown in the Table 3.2.

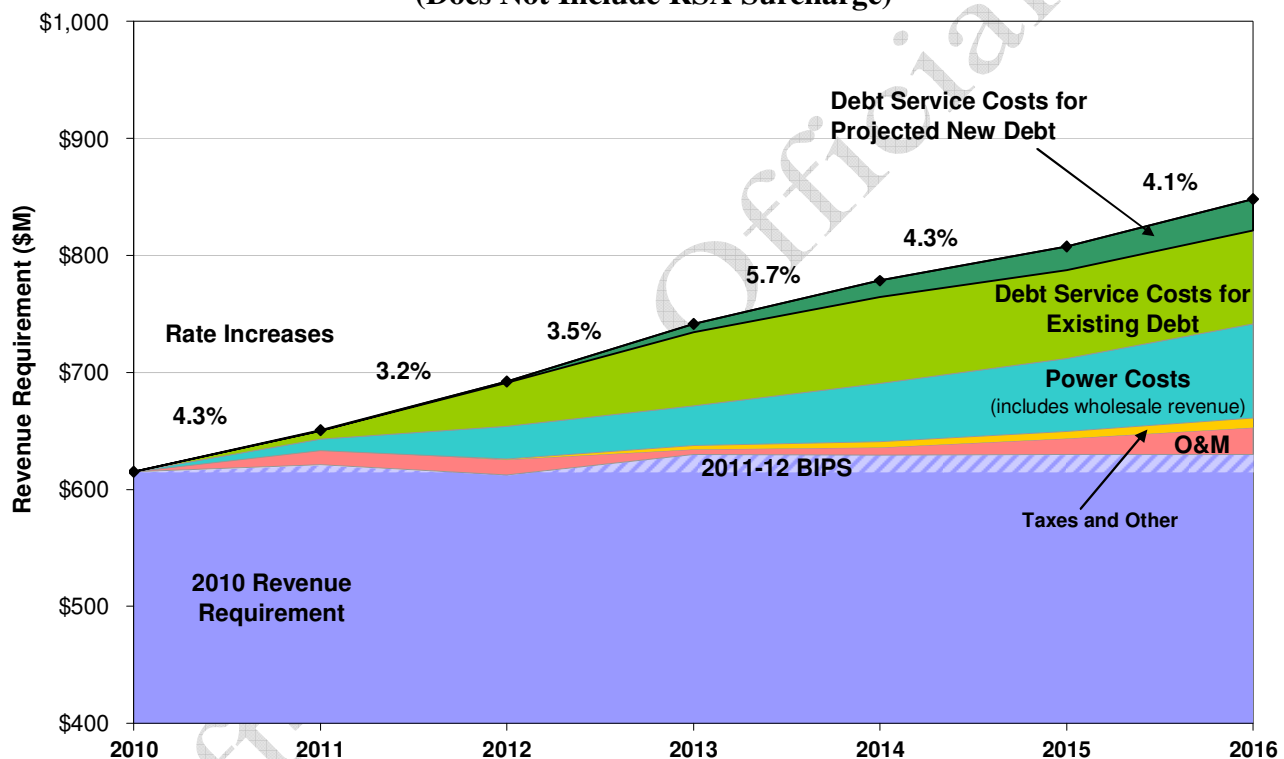
Table 3.2
CIP Overhead and Other O&M Reductions (\$M)

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
CIP Overhead and Other Reductions	52.8	60.9	61.0	71.3	77.6	83.4

4 Financial Baseline Rate Projection

This section applies the information and assumptions discussed earlier to lay out the resulting expectation of cost to ratepayers to maintain existing levels of service during 2011-16. It should be noted that these projections contain uncertainty and accordingly should be viewed as primarily illustrating a likely mid-range point estimate of a range of possible costs. The primary cost drivers, in order of magnitude are: (a) increased debt service costs; (b) increased net power costs; and (c) increases in O&M spending. Figure 4.1 below shows changes in the overall revenue requirement from the 2010 level, and the various colors illustrate what costs are causing the pressure on the revenue requirement.

Figure 4.1
Rate Drivers (\$M)
(Does Not Include RSA Surcharge)



(a) Debt Service

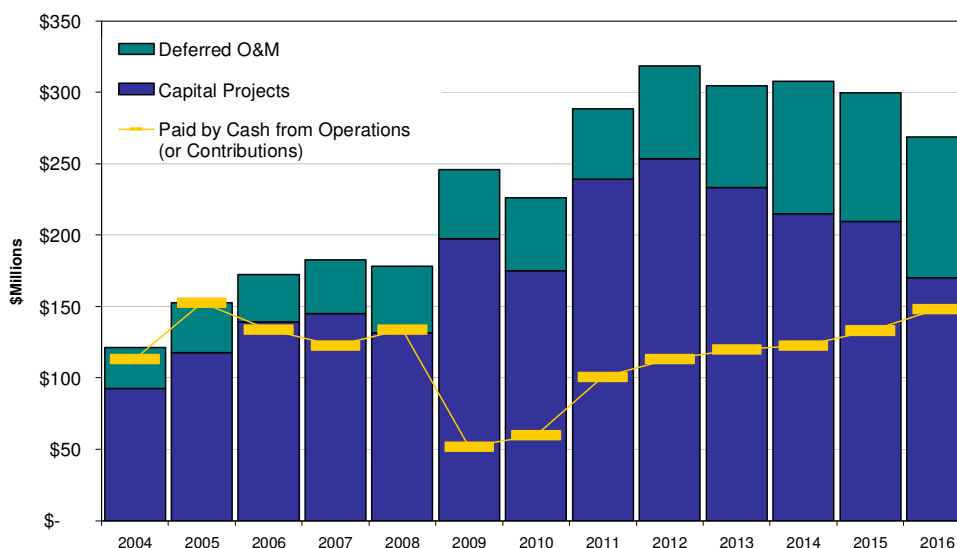
Increased costs associated with debt service (and, by extension, capital spending) are the primary driver for the rate increases in the next six years. This shift is caused by several factors. First, \$180 million¹² in wholesale revenue shortfalls in 2009 and 2010 caused maintenance deferrals and greater debt financing of CIP. A portion of this combined \$180 million deficit was offset by reducing expenditures, though many of the reductions were deferrals of maintenance and other projects, serving only to delay the financial

¹² For 2009, rates assumed net wholesale revenues of \$178 million, leaving a \$110 million revenue gap between the assumed amount and the \$68 million actually realized. The wholesale revenue ultimately included in the Adopted Budget was \$142.2 million. There was no explicit requirement at the time for the net wholesale revenue used to set rates to match the budget, and so while the rates met financial policy targets, the Adopted Budget did not. New financial policies have since addressed this problematic loophole. For 2010, net wholesale revenues actuals were approximately \$70 million below the amount assumed in the revenue requirement, totaling \$180 million for the 2 years.

impact. The rest of the shortfall was absorbed by financing a much larger portion of capital requirements via bond proceeds (77%) than planned. Figure 4.2 below shows that this was a noticeable departure from financing patterns from previous years.

A financial policy change has also increased the rate at which City Light issues bonds. The City Council approved a 13.8% rate increase for 2010, which increased expected retail revenues by about \$75 million. Council also at that time reduced the financial policy for debt service coverage from 2.0x to 1.8x. Reducing coverage targets reduced near term rate pressure and because of the introduction of the RSA, this change could be made without impacting expected credit standings. However, the long term effect of this policy change is to lower the amount of capital that is funded with operating dollars each year, increasing debt service and therefore rates in the longer term. Going forward, City Light's policy is to fund approximately 60% of CIP with debt, and the financial baseline projects issuing approximately \$175 million in bonds each year on average.

Figure 4.2
CIP and Deferred O&M Funded with Cash from Operations (\$M)



The immediate effect of the revenue shortfalls and policy changes on rates was offset in part by savings from a large bond refinancing in 2010. The refunding savings were front loaded into 2010 and 2011 to provide seed funds for the new RSA, offsetting the increased debt service from the new debt until 2012. (This is illustrated in Figure 2.4 in Section 2.2.)

(b) Power Costs

Power costs are the second largest contributor to the rate increases projected over the coming six years. In the chart above, power costs includes power contract costs, renewable acquisitions to meet I-937, and offsetting wholesale sales, contract, and power marketing revenues. As mentioned earlier in Section 2.4, power contract costs are forecast to increase, primarily because BPA rates are expected to rise and because of the need to acquire (high-priced) renewables to meet renewable portfolio standard requirements. At the same time, wholesale power revenues are forecast to remain much lower than realized in the previous decade because of low gas prices and decreasing quantities of surplus energy. Finally, supplemental revenues from other power-related marketing activities (discussed in Section 2.6)

are projected to decline as well, because surplus RECs and capacity are expected to decline to near nothing in future years. All these factors contribute to upward rate pressure related to power costs.

(c) O&M Costs

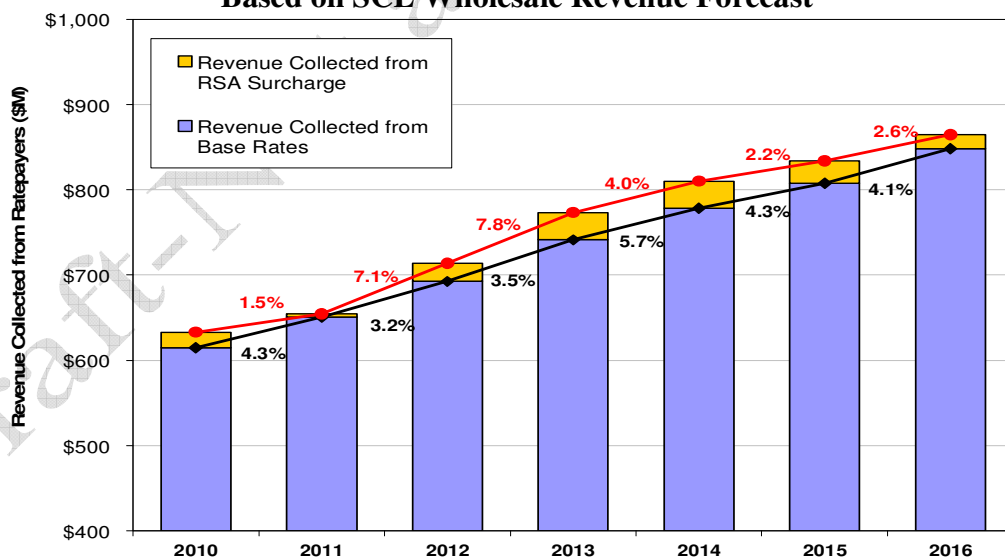
Figure 4.1 above shows a noticeable dip in O&M costs in 2012. The Utility made a deliberate effort to constrain 2012 O&M spending (in part by accelerating some spending into 2011), in order to reduce the 2012 rate increase, which was driven primarily by higher debt service. This reduced the rate increase in 2012, but as O&M returns to steady state/sustainable levels in 2013 there is a one-time increase larger than in subsequent years. O&M increases from 2013-2016 are driver by the factors outlined in Section 4 of this document, where some cost elements, such as material costs and health care costs, are anticipated to increase at a rate higher than inflation.

RSA, Net Wholesale Revenue, and Rates

The rate increases shown in Figure 4.1 do not include RSA surcharges. As mentioned earlier, the net wholesale revenue assumed for rate setting purposes is equivalent to the RSA baseline.

For future years, wholesale revenue (RSA baseline) is set using the approach specified in the RSA Ordinance—it is the average of realized net wholesale energy sales from 2002 to present. This approach yields net wholesale revenue that is up to \$30 million higher than the forecast of net wholesale revenue produced by City Light staff. Therefore, the rates in the strategic plan baseline are lower than they would be if SCL's internal wholesale revenue forecast were used. If base rates are set as shown in this baseline, but wholesale revenues are actually lower like the forecast values, the RSA account balance will be eroded and a rate surcharges will be implemented. Figure 4.3 below shows revenue forecast to be collected via the RSA surcharge as an addition to base rate revenue.

Figure 4.3
Forecasted Retail Revenue Including RSA Surcharges
Based on SCL Wholesale Revenue Forecast



As an alternative, base rates could be increased to eliminate this reliance on the RSA to fund the gap between the amount of net wholesale revenue specified by the RSA Ordinance and the Utility's current outlook. If that approach were selected, base rates would not likely be adjusted prior to 2013, as base rates have already been adopted for 2011-2012.

Impact on the Average Residential Customer

Figure 4.4 below shows a monthly bill for an average residential customer that uses about 700 kwh a month. Given the rate increases and projected RSA surcharges in the financial baseline forecast, the average residential customer's monthly bill would increase on average by about \$5 each year.

Figure 4.4

Monthly Bill for an Average Residential Customer



4.1 Overall Conclusions

SCL's revenue requirement and rates for providing today's level of service are projected to increase in the coming years, even prior to consideration of prudent strategic priorities and initiatives. Points for consideration include:

1. Some elements of the drivers for the rate increases are generally controllable, others are not.

Relatively more controllable:

- Program additions (generally excluded from this baseline projection)
- Number of staff / how work is performed
- Size and timing of future capital improvement budgets

Relatively less controllable or not controllable:

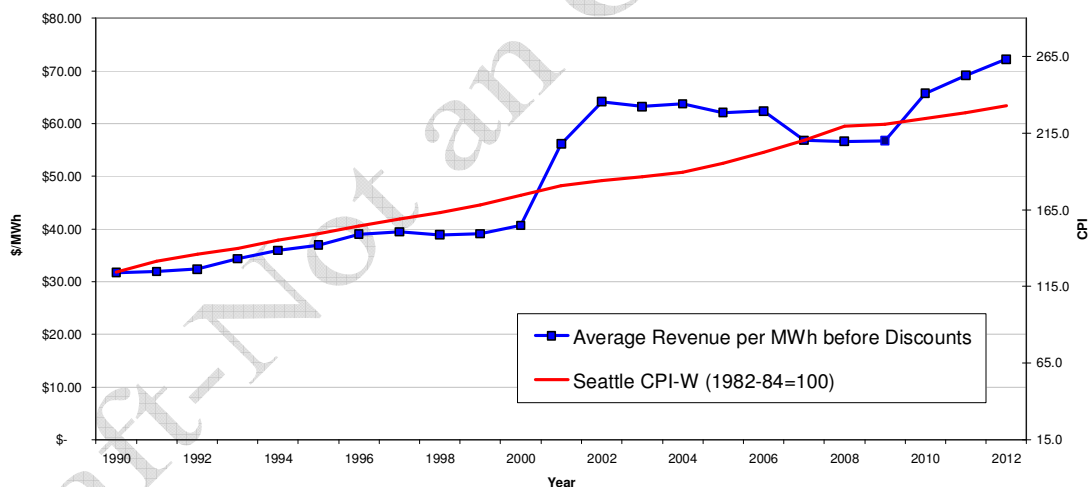
- Labor cost changes
- Net wholesale energy prices and volumes
- Costs related to meeting regulatory requirements
- Interest rates on newly issued debt
- Upcoming debt service changes for capital spending already completed

2. All spending is reflected in rates, either sooner or later, but financial policies determine timing. Two examples:
 - Debt financing spreads capital costs across a number of years, but adds interest cost. At different times in the history of the Utility, financial policies have varied reflecting either more or less willingness to pay costs upfront or to defer them to future years. How much capital is debt financed is primarily determined by debt service coverage targets.
 - The net wholesale revenue assumption affects rate levels, but revenue shortfalls are collected in some form, eventually. An aggressive net wholesale revenue assumption will yield a lower base rate initially, but if actual revenues fall short, either higher debt (leading to higher debt service and higher future rates) or RSA surcharges will make up the difference eventually.

Financial policy decisions such as those described above have long term impacts. The utility most recently revised its financial policies in the spring of 2010 and will be revisiting them again after 2011.

3. City Light Rates, over the past twenty year period, have grown at a rate comparable to inflation, though at times have led or lagged the overall inflation. This is illustrated in the following chart.

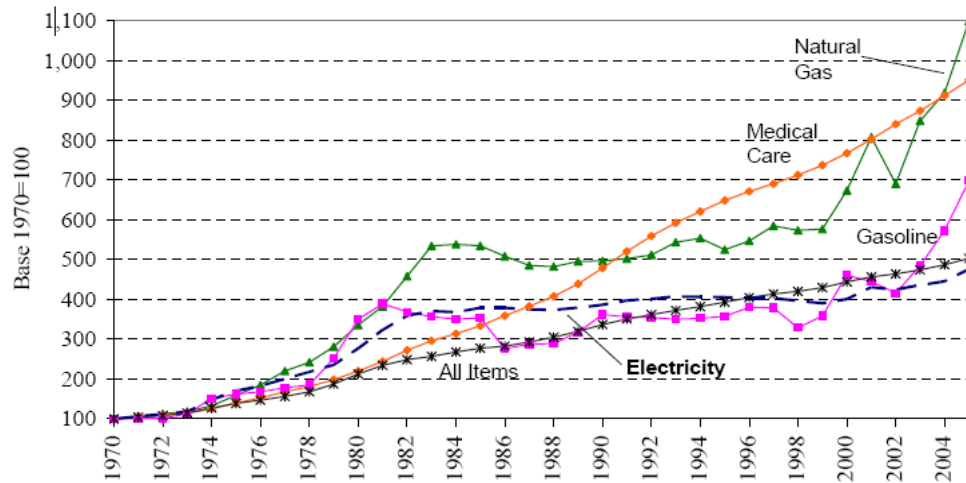
Figure 4.5
City Light Retail Rates and CPI (\$M)



The same may be true over a future period of similar duration, though costs in the next several years are likely to increase at rates ahead of inflation (inflation is projected at about 2% annually).

SCL rates will increase, but will be less volatile and grow at a lower rate than experienced by certain other essential services or commodities, some of which have grown consistently at rates significantly higher than inflation over an extended period, or have exhibited significant volatility (natural gas).

Figure 4.6¹³
Comparison of Electricity and Other Consumer Price Trends 1970-2005



4. Because SCL rates are low, percentage changes in our rates are less impactful to customers than for the same percentage change for the customers of utilities whose rates are significantly higher than SCL's.
5. SCL rates are and are likely to remain among the lowest nationwide and in the region.

Figure 4.7
City Light Retail Rates Compared with Other Utilities

City	Avg System Rate (cents/kwh)	Local Utility	Avg System Rate (cents/kwh)
1. Seattle (2010)	6.54**	1. Tacoma*	5.63
2. Indianapolis	6.58	2. Seattle (2010)*	6.54**
3. Charlotte	7.04	3. Snohomish*	7.42
4. San Antonio*	7.56	4. Avista	7.99
5. Denver	7.93	5. Portland General	8.98
6. Columbus	8.42	6. Puget Sound Energy	9.20
7. Austin*	8.53		
8. Memphis*	8.60		
9. Nashville*	8.99		
10. Milwaukee	9.89		
	U.S. Average		
11. Detroit	9.95		
12. El Paso	10.40		
13. Jacksonville*	10.47		
14. Phoenix	10.52		
15. Chicago	10.91		

* Publicly Owned
 ** 6.83 w/ temporary RSA surcharge

Rates as of December 2009 unless otherwise indicated.

¹³ Source: EIA Annual Energy Review 2004, EIA Monthly Energy Review March 2006, and US Bureau of Labor Statistics.
<http://www.brattle.com/documents/UploadLibrary/ArticleReport2414.pdf>

6. As noted in Section 1, there are trends and cost drivers that the entire electric utility industry is facing. SCL will be subject to many of them, but will be relatively immune to others (e.g. greenhouse gas limitations). We believe that SCL is better positioned than many (if not most) electric utilities to respond to factors that will put upward pressure on electric utility rates. Our clean and renewable power supply will not require the costs of carbon mitigation that may be significant for other electric utilities.
7. While the Financial baseline represents a projection of costs for maintaining the current level of service, this should not be taken as an indication that no improvement opportunities exist. The results of the baseline rate projection compel us to look for opportunities to reduce costs. Management is confident that there are numerous opportunities to improve efficiency and effectiveness through programs that may require changes in policies and practice. The strategic plan, through initiatives to be proposed, will document such opportunities.